

EVERLIGHT Automotive Portfolio & Roadmap

1. Interior
2. Multi Color
3. Exterior
4. IC Smartled
5. IR

Okt 2022

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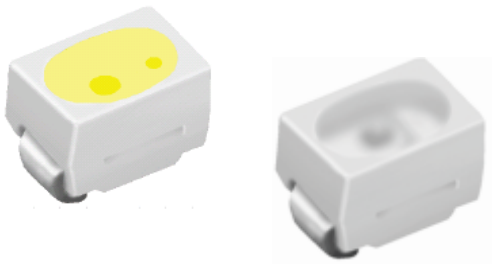
Automotive Interior

October 2022

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EL Mini Top View



Size	2.2 x 1.4 x 1.35 mm
Key Points	Compact & mini size PLCC2 Various Colors available Proven high Quality
Application	Automotive Interior

Electro Optical Characteristics @ typ current / 25°C

Color	Part No.	Vf (V)	Brightness (mcd)	Test current (mA)	Max current (mA)	Max Tj (°C)	Viewing Angle (°)	CIE/nm
White	65-11-C70200H-AM	2.75-3.75	1400-3550	20	30	125	120	Cx 0.3/Cy 0.3
White	65-11-C70200M-AM	2.75-3.75	560-1400	20	30	125	120	Cx 0.3/Cy 0.3
White	65-11-C70200L-AM	2.75-3.75	224-710	20	30	125	120	Cx 0.3/Cy 0.3
Ice Blue	65-11-IB0100L-AM	2.75-3.75	140-560	10	20	125	120	Cx 0.18/Cy 0.23
Sky Blue	65-11-SB0100L-AM	2.75-3.75	112-450	10	20	125	120	Cx 0.16/Cy 0.08
Blue	65-11-UB0200L-AM	2.75-3.75	224-560	20	30	125	120	463-475 nm
Green	65-11-UG0200H-AM	2.75-3.75	710-1800	20	30	125	120	520-535 nm
Yellow	65-21-UY0200H-AM	1.75-2.75	710-1400	20	70	125	120	585-594 nm
Red	65-21-UR0200H-AM	1.75-2.75	710-1400	20	70	125	120	618-627 nm

EL Top View

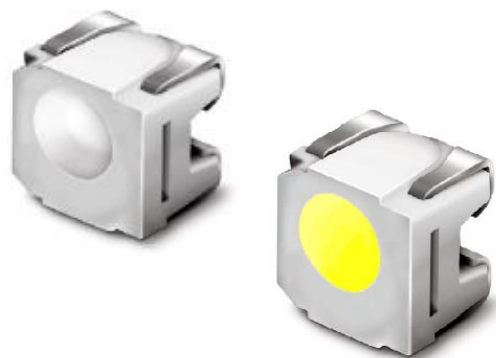


Size	3.5 x 2.8 x 1.85 mm
Key Points	Compatible standard PLCC 2 package Various Colors available Proven high Quality
Application	Automotive Interior

Electro Optical Characteristics @ typ current / 25°C

Color	Part No.	Vf (V)	Brightness (mcd)	Test current (mA)	Max current (mA)	Max Tj (°C)	Viewing Angle (°)	CIE/nm
White	67-11-C70200H-AM	2.75-3.75	1400-3550	20	30	125	120	Cx 0.3/Cy 0.3
White	67-11-C70200M-AM	2.75-3.75	560-1400	20	30	125	120	Cx 0.3/Cy 0.3
White	67-11-C70200L-AM	2.75-3.75	224-710	20	30	125	120	Cx 0.3/Cy 0.3
Ice Blue	67-11-IB0100L-AM	2.75-3.75	224-710	10	20	125	120	Cx 0.18/Cy 0.23
Sky Blue	67-11-SB0100L-AM	2.75-3.75	112-450	10	20	125	120	Cx 0.16/Cy 0.08
Blue	67-11-UB0200H-AM	2.75-3.75	224-560	20	30	125	120	463-475 nm
Green	67-11-UG0200H-AM	2.75-3.75	710-1800	20	30	125	120	520-535 nm
Yellow	67-21-UY0200L-AM	1.75-2.75	140-450	20	30	125	120	582-594 nm
	67-21-UY0200H-AM	1.75-2.75	710-1400	20	70	125	120	585-594 nm
Red	67-21-UR0200L-AM	1.75-2.75	140-450	20	30	125	120	618-630 nm
	67-21-UR0200H-AM	1.75-2.75	710-1400	20	70	125	120	618-627 nm

EL Side View



Size	4.0 x 4.0 x 3.6 mm
Key Points	Side view with PLCC 2 Various Color Range available Ideal for coupling into light guide
Application	Automotive Interior

Electro Optical Characteristics @ typ current / 25°C

Color	Part No.	Vf (V)	Brightness (mcd)	Test current (mA)	Max current (mA)	Max Tj (°C)	Viewing Angle (°)	CCT/nm
White	57-11-C70200H-AM	2.75-3.75	1120-2800	20	30	125	120	Cx 0.3/Cy 0.3
Ice Blue	57-11-IB0100L-AM	2.75-3.75	224-710	10	20	125	120	Cx 0.18/Cy 0.23
Sky Blue	57-11-SB0100L-AM	2.75-3.75	112-450	10	20	125	120	Cx 0.16/Cy 0.08
Yellow	57-21-UY0200H-AM	1.75-2.75	710-1400	20	70	125	120	585-594 nm
Red	57-21-UR0200H-AM	1.75-2.75	710-1400	20	70	125	120	618-627 nm
Blue	57-11-UB0200H-AM	2.75-3.75	224-560	20	30	125	120	463-475 nm

LED based on Silver Lead frame

EL Micro Side View



Size	3.0 X 1,1 X 1,2mm
Key Points	PLCC2 , Side view Optimized with light guide solution Sulfur Robust
Application	Automotive Interior/ Exterior

Electro Optical Characteristics @ Typ current / 25°C

Color	Part No.	Vf (V)	Brightness (mcd)	Brightness (lm)	Test current (mA)	Max current (mA)	Max Tj (°C)	Viewing Angle (°)	CCT/nm
White	3011-C70201H-AM	2.70-3.50	900~1800	2,9~5,9	20	30	125	120	0,32/0,32
Blue	3011-UB0201H-AM	2,75~3,75	180~450	0,56~1,4	20	30	125	120	451~463nm
Green	3011-UG0201H-AM	2,75~3,75	710~1400	2,2~5,9	20	30	125	120	520~535nm
Phosphor Green	3011-PYG0201H-AM	2,75~3,75	710~1800	2,2~5,9	20	30	125	120	0,44/0,52
Yellow	3011-UY0201H-AM	1.75-2.75	560-1120	1,7~3,5	20	30	125	120	585-594 nm
Red	3011-UR0201H-AM	1.75-2.75	560-1120	1,7~3,5	20	30	125	120	620-629 nm
Super Red	3011-SR0201H-AM	1.75-2.75	450-710	1,4~2,2	20	30	125	120	627-639nm

EL Top View Flat



Size	2.8 x 3.5 x 0.7mm
Key Points	High efficiency with best lm/\$ Ideal for cost sensitive function CRI 80/ CRI 90 Small color binning (16 Sub bins)
Application	Various Interior lighting, Room & Dome Lamp,

Electro Optical Characteristics @ Typ current / 25°C

Color	Part No.	Vf (V)	Brightness (lm)	Test current (mA)	Max current (mA)	Max Tj (°C)	Viewing Angle (°)	CCT/nm
White CRI 80	67-11S-W80600H-AM	2.5-3.5	24-40	60	80	125	120	2600~3200K
	67-11S-N80600H-AM	2.5-3.5	24-40	60	80	125	120	3200~4700K
	67-11S-C80600H-AM	2.5-3.5	24-40	60	80	125	120	4700~6700K
	67-11S-N81000H-AM	2.5-3.5	35-50	100	150	125	120	3200~4700K
White CRI 90	67-11S-W91000H-AM	2.5-3.5	30~45	100	150	125	120	2600~3200K
	67-11S-N91000H-AM	2.5-3.5	30~45	100	150	125	120	3200~4700K

LED based on Silver Lead frame



Size	1.6 x 0,8 x 0,55 mm
Key Points	Smallest PLCC 2 Various Colors available AECQ102 Qualified
Application	Automotive Interior

Electro Optical Characteristics @ typ current / 25°C

Color	Part No.	Vf (V)	Min Brightness (mcd)	Test current (mA)	Viewing Angle (°)	CIE/nm
White	1608-C70100H-AM	2.5-3.5	610	10	120	Cx 0.34, Cy 0.33
Ice blue	1608-IB0100M-AM	2.75-3.75	224	10	120	Cx0.18, Cy 0.23
Red	1608-UR0100M-AM	1.5-2.5	280	10	120	612-621
Super Red	1608-SR0100M-AM	1.5-2.5	180	10	120	627-639
Green	1608-UG0100M-AM	2.25-3.25	520	10	120	520-530
Yellow	1608-UY0100M-AM	1.75-2.75	280	10	120	585-597



Size	2.2 x 1,4 x 0,7 mm
Key Points	Compact & mini size PLCC2 Various Colors available AECQ102 Qualified
Application	Automotive Interior

Electro Optical Characteristics @ typ current / 25°C

Color	Part No.	Vf (V)	Min Brightness (mcd)	Test current (mA)	Viewing Angle (°)	CIE/nm
White	2214-C70201H-AM	2.75-3.75	1000	20	120	Cx 0.34, Cy 0.33
White	2214-C70301H-AM	2.75-3.75	2240	30	120	Cx 0.34, Cy 0.33
PC Amber	2214-PA0201H-AM	2.75-3.5	710	20	120	Cx 0.57, Cy 0.42

EVERLIGHT Automotive

Multi color

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Multi Color- Considerations



SMARTLED

Color

2

(CW/WW)

3

(RGB)

4

(RGBY/RGB
W)

Power

Low

Middle

(150mA/chip)

Light Orientation

Top
view

Side
View



Micro Multi (2 chip)



Size

✓ 1.2 x 1.6 x 0.7mm

Key Feature

- ✓ 2 chip with Phosphor on Ceramic
- ✓ Compact size on Robust Ceramic Substrate
- ✓ Tj Max 150

Application

- ✓ Ambient Lighting, Mood Lamp,
- ✓ Dual function application such as Reverse + Turn signal
- ✓ Various Signature Lighting

Electro Optical Characteristics @ Typ current / 25°C

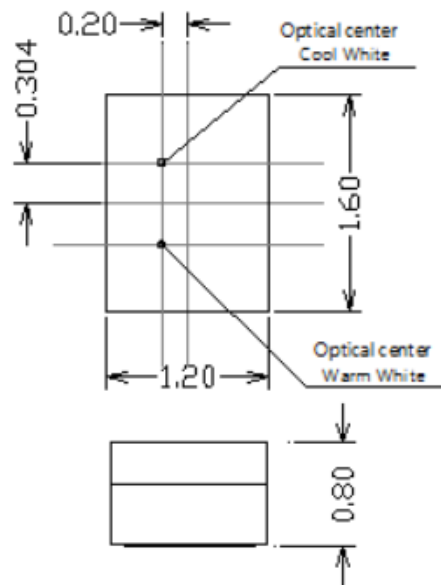
Color	Part No.	Vf (V)	Brightness (lm)	Test current (mA)	Max current (mA)	Max Tj (°C)	Viewing Angle (°)	CCT/nm
Cool White	CH1216-CWWW80-AM	2.75-3.5	23-33	80	120	150	120	6300K
Warm White		2.75-3.5	23-33	80	120	150	120	2700K

Micro Multi (2 chip)

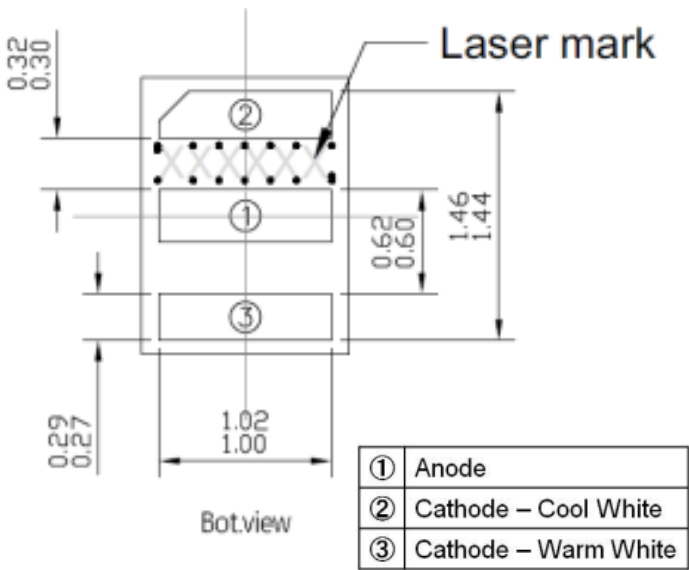


Size	✓ 1.2 x 1.6 x 0.7mm
Key Feature	✓ 2 chip with Phosphor on Ceramic ✓ Compact size on Robust Ceramic Substrate ✓ Tj Max 150
Application	✓ Ambient Lighting, Mood Lamp, ✓ Dual function application such as Reverse + Turn signal ✓ Various Signature Lighting

Package Design



Pad layout



EL Top View RGB



Size

3.5 x 2.8 x 1.8mm

Key Points

- ✓ R,G,B with PLCC6 PKGs
- ✓ Enhanced corrosion robustness
- ✓ Flexible color options
- ✓ Improved Brightness with 67-63-RGB0200H-AM (**SOP 2022**)

Application

Ambient light, Switch backlight, Automotive Interior

Electro Optical Characteristics @ Typ current / 25°C

Color	Part No.	Vf (V)	Brightness (mcd)	Test current (mA)	Max current (mA)	Max Tj (°C)	Viewing Angle (°)	CCT / nm
Red	67-63-RGB0201H-AM	1.7-2.7	560-1120	20	50	125	120	621-633
Green		2.7-3.7	1120-2240	20	30	125	120	520-535
Blue		2.7-3.7	180-450	20	30	125	120	459-471
Red	67-63-RGB0200H-AM	1,75-2,75	710-1120	20	50	125	120	623-632
Green		2,5-3,5	1800-2800	20	30	125	120	519-531
Blue		2,5-3,5	224-355	20	30	125	120	447-456

EL Top View RGB



Size

3.5 x 2.8 x 1.8mm

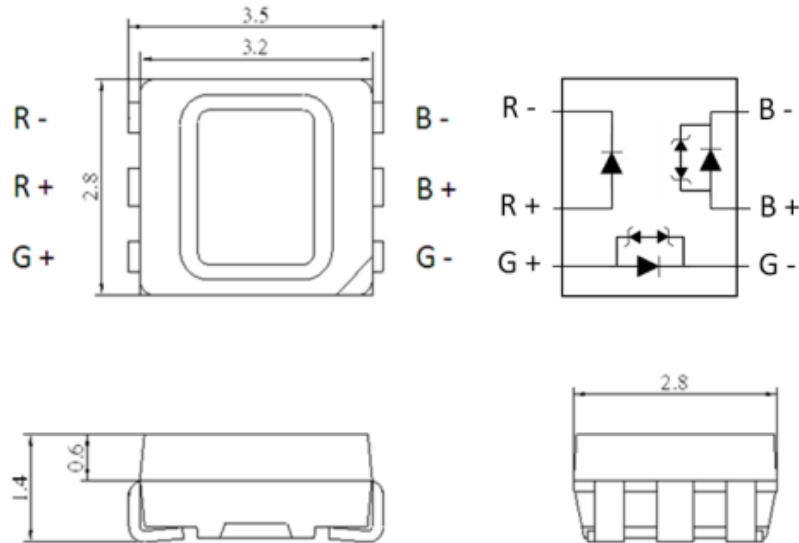
Key Points

- ✓ R,G,B with PLCC6 PKGs
- ✓ Enhanced corrosion robustness
- ✓ Flexible color options
- ✓ Improved Brightness with 67-63-RGB0200H-AM (**SOP 2022**)

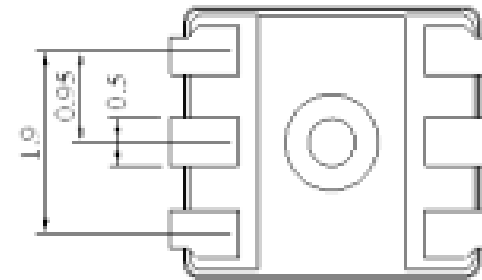
Application

Ambient light, Switch backlight, Automotive Interior

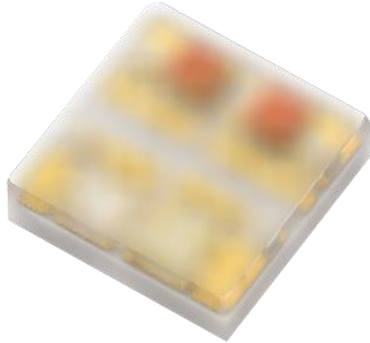
Package Design



Pad layout



EL MICRO Multi (RGBY)



Size

✓ 2.5 X 2,5 X0,75 mm

Key Feature

✓ Structure : 4 chips on Ceramic
 ✓ Sulfur Robust
 ✓ Tj Max 150
 ✓ Color : Red /Green/ Blue/ Yellow
 ✓ **Other color Combination possible (RedX2, YellowX2)**

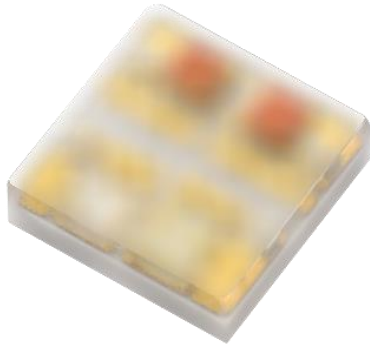
Application

✓ Ambient Lighting, Mood Lamp, Rear lamp, Fog lamp,
 ✓ Turn Indicator
 ✓ Various Multi Functional Exterior lamp

Electro Optical Characteristics @ test current/25°C

Color	Part No.	Vf (V)	Brightness (mcd/lm)	Test current (mA)	Max current (mA)	Max Tj (°C)	Viewing Angle (°)	CCT/nm
R	CH2525-RGBY0401H-AM	1,75~2,5	1120~1400	40	100	150	120	623
G		2.75-3.5	2240~3550					527
B		2.75-3.5	355~450					460
Y		1,75-2.5	900~1400					594

EL MICRO Multi (RGBY)



Size

✓ 2.5 X 2,5 X0,75 mm

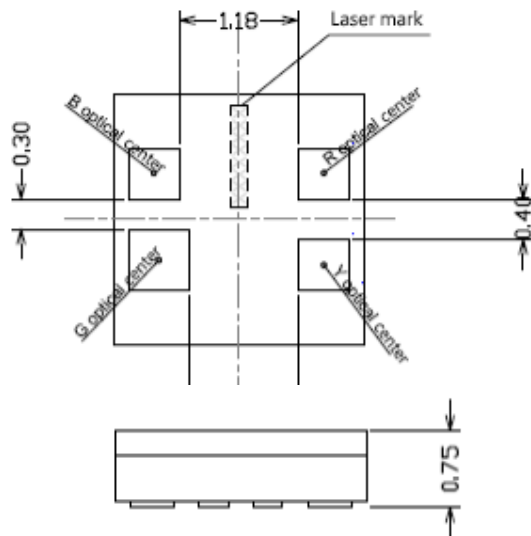
Key Feature

- ✓ Structure : 4 chips on Ceramic
- ✓ Sulfur Robust
- ✓ Tj Max 150
- ✓ Color : Red /Green/ Blue/ Yellow
- ✓ **Other color Combination possible (RedX2, YellowX2)**

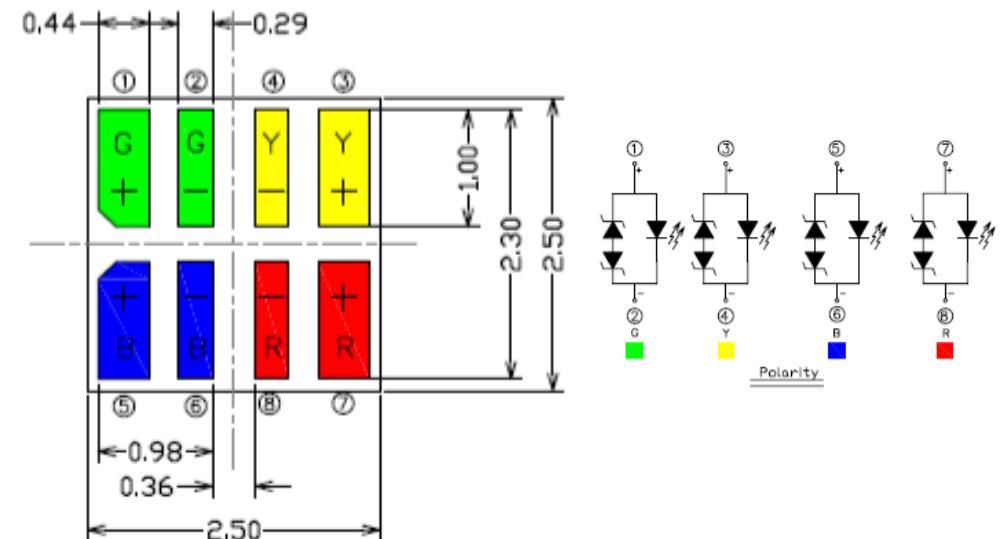
Application

- ✓ Ambient Lighting, Mood Lamp, Rear lamp, Fog lamp,
- ✓ Turn Indicator
- ✓ Various Multi Functional Exterior lamp

Package Design



Pad layout



EL MICRO Multi (RGB+ White)



Size

✓ 2.5 X 2,5 X0,75 mm

Key Feature

✓ Structure : 4 chips on Ceramic
✓ Sulfur Robust
✓ Tj Max 150
✓ Color : Red /Green/ Blue/ White

Application

✓ Ambient Lighting, Mood Lamp
✓ Various Multi Functional Exterior lamp

Electro Optical Characteristics @ test current/25°C

Color	Part No.	Vf (V)	Brightness (mcd/lm)	Test current (mA)	Max current (mA)	Max Tj (°C)	Viewing Angle (°)	CCT/nm
R	CH2525E-RGBW0401H-AM	1,75~2,5	900~1400	40	100	150	120	623
G		2.25~3.25	2240~3550					527
B		2.25~3.25	355~900					460
Y		2.25~3.25	2800~4500					5180-6680k

EL MICRO Multi (RGB+ White)



Size

✓ 2.5 X 2,5 X0,75 mm

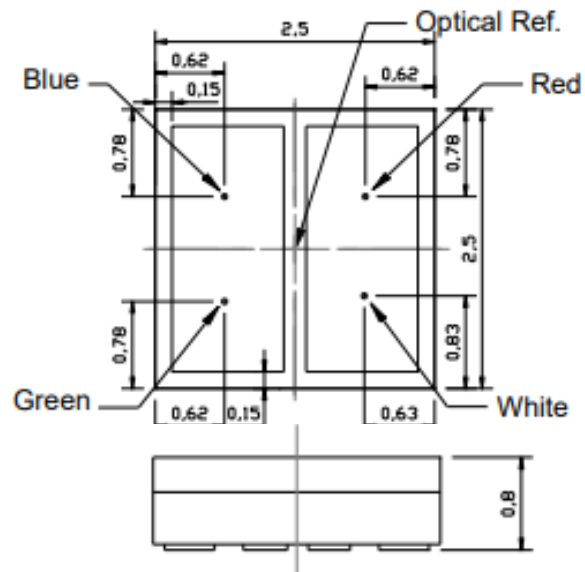
Key Feature

- ✓ Structure : 4 chips on Ceramic
- ✓ Sulfur Robust
- ✓ Tj Max 150
- ✓ Color : Red /Green/ Blue/ White

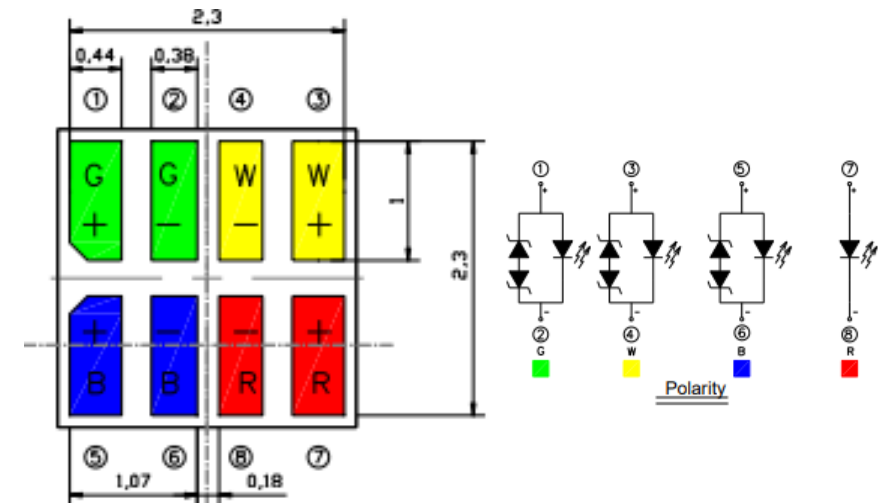
Application

- ✓ Ambient Lighting, Mood Lamp
- ✓ Various Multi Functional Exterior lamp

Package Design



Pad layout



EVERLIGHT Automotive Multi color New Product Update

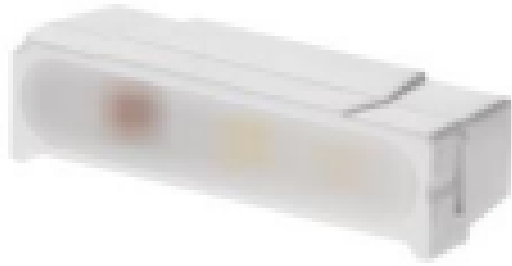
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EL RGB 5515

(Side view)



Size

✓ 5.5 X 1.8 X 1.52 mm

Key Feature

✓ Structure : 3 chips
 ✓ Sulfur Robust
 ✓ Tj Max 125
 ✓ Color : Red /Green/ Blue

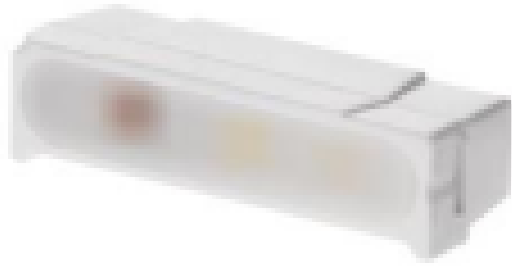
Application

✓ Ambient, Switch, Door trim panel, Headlining,

Electro Optical Characteristics @ test current/25°C

Color	Part No.	Vf (V)	Brightness (mcd/lm)	Test current (mA)	Max current (mA)	Max Tj (°C)	Viewing Angle (°)	CCT/nm
R	5515-RGB0200H-AM	1,75~2,75	710~1400	20mA	R: 50 mA	125	120	621
G		2.75-3.5	1800~3550		G: 20 mA			525
B		2.75-3.75	280~710		B: 30 mA			467

EL RGB 5515 (Side view)



Size

✓ 5.5 X 1.8 X 1.52 mm

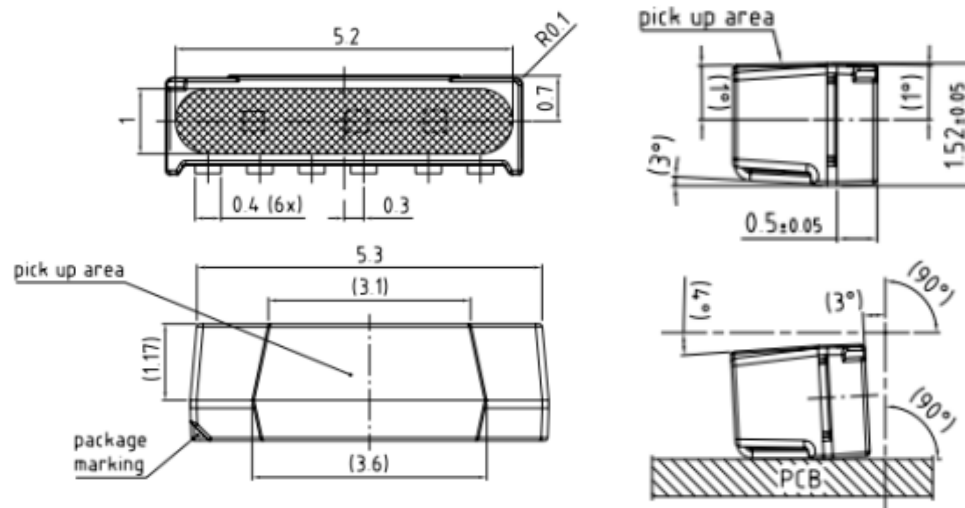
Key Feature

- ✓ Structure : 3 chips
- ✓ Sulfur Robust
- ✓ Tj Max 125
- ✓ Color : Red /Green/ Blue

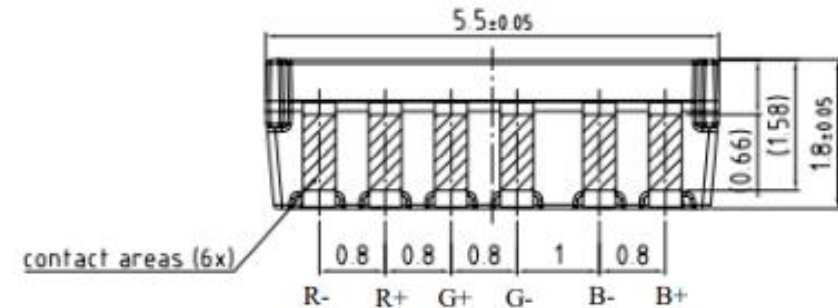
Application

- ✓ Ambient, Switch, Door trim panel, Headlining,

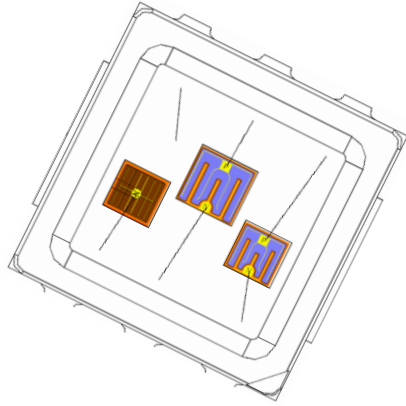
Package Design



Pad layout



EL RGB 3030 (Mid Power)



Size

✓ 3.00 x 3.20 x 0.60 mm

Key Feature

- ✓ Thin package design
- ✓ Mid power driving current up to 250mA MAX
- ✓ Improved brightness
- ✓ Sulfur robust

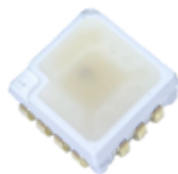
Application

✓ Ambient, door trim, Logo lamp, welcome light

Electro Optical Characteristics @ test current/25°C

Color	Part No.	Vf (V)	Brightness min. (mcd)	Test current (mA)	Max current (mA)	Max Tj (°C)	Viewing Angle (°)	CCT/nm
R	XI3030-RGB2001H-AM	1,75~2,5	7959/25lm	200	250	150	120	619 – 629
G		2.75-3.5	9869/31lm					520 - 535
B		2.75-3.5	2546/8lm					457 - 467

IC Smartled EL3534



Advantages & Benefits

Size	✓ 3.5x3.4x1.3 (mm)
Key Feature	✓ RGB+IC LED compliant with ISELED protocol ✓ Pre-calibrated to D65 ✓ Temperature compensation ✓ AEC-Q100/ Q102 planning ✓ Compatible to <u>seddLED 3.0 (DOMINANT)</u>

Electro Optical Characteristics @ Typ current / 25°C

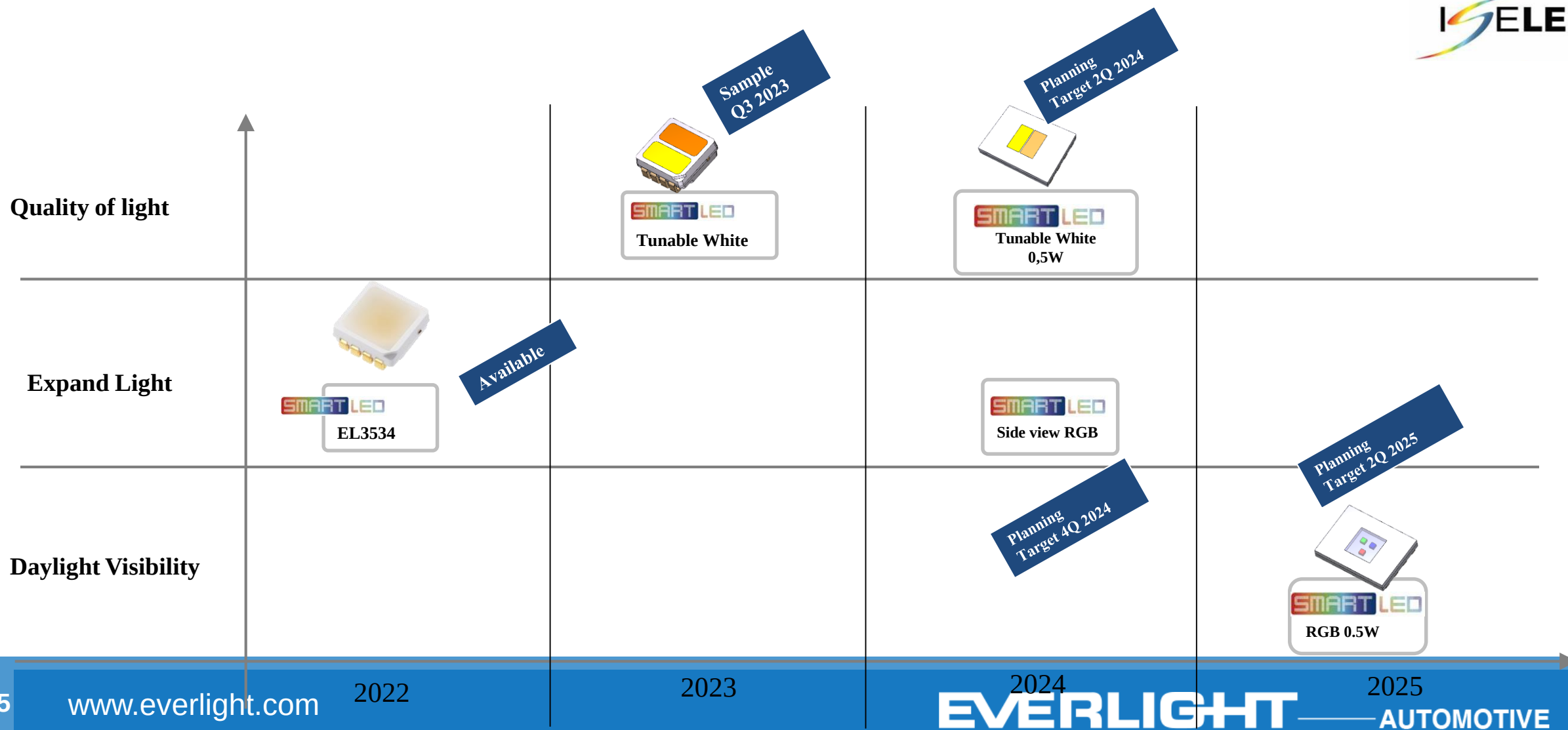
Color	Part No.	V _F (V)	Intensity (mcd@D65)	IF typ (mA)	IF max (mA)	Max T _j (°C)	Wavelength (nm)	Status
Red Green Blue	EL3534-RGBISE0391L-AM	5	1400	17 12 10	26 27 27	125	620 530 468	RA _{Ac}
Red Green Blue	EL3534-RRGBISE0xxxL-AM	5	2000	TBD	TBD	125	TBD	A

*A sample—10/24/22', B sample—11/25/22'
RA=AEC-Q102—2/14/23'

*Status: A=A sample, B= B sample, C=C sample, RA=AEC-Q102, M=MP



The Roadmap - SMART LED Plan



EVERLIGHT Automotive Head lamp LED

October 2022

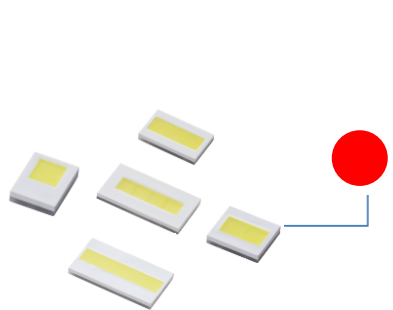
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ALFS Head lamp LED summary



● Available ● Not for new design ● Under development ● Concept



ALFS B/D

- First Head lamp design
- High thermal conductivity



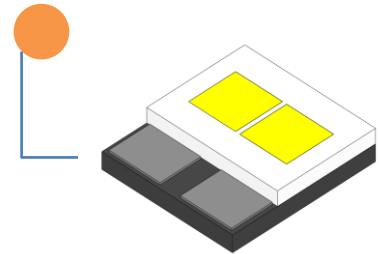
ALFS G

- High Luminance type
- SOP since 2020
- **Min 400lm@ 1A in 2023**



ALFS E

- Smaller LES (0,58mm²)
- SOP : 2Q 2022
- **Min 200lm@ 700mA in 2022**



ALFS HT

- Top electrical contact
- **Min 410lm/chip/2023**
- PPAP target 2Q 2023



Key Feature

- ✓ SMD type High Brightness Head lamp LED
- ✓ SOP since 2020
- ✓ Minimum **400lm@ 1A in 2023**
- ✓ Chip size : **1,0 X 1,0mm (LES 1.19mm²)**
- ✓ Latest Phosphor Technology (Phosphor In Glass)
- ✓ Neutral Thermal Pad

Application

Low Beam, High Beam, DRL, Position

Electro Optical Characteristics @ Typ current / 25°C

Part No.	Package Size(mm)	Brightness	VF (V)	Test current	Max current	Max Tj (°C)	Viewing Angle	Typ Rth	LES(mm ²)
ALFS1G-C010001H-AM	2.3*1.9*0.80	380~450	2,9~3,8	1000	1500	150	120	4.0K/W	1.19
ALFS2G-C010001H-AM	3,75*3,5*0.70	700~860	5,8~7,6	1000	1500	150	120	2,7K/W	2,38
ALFS1G-PA10001H-AM	2.3*1.9*0.80	180~240	2,9~3,8	1000	1500	150	120	3,3K/W	1,19



Key Feature

- ✓ SMD type High Brightness Head lamp LED
- ✓ SOP since 2020
- ✓ Minimum **400lm@ 1A in 2023**
- ✓ Chip size : **1,0 X 1,0mm (LES 1.19mm²)**
- ✓ Latest Phosphor Technology (Phosphor In Glass)
- ✓ Neutral Thermal Pad

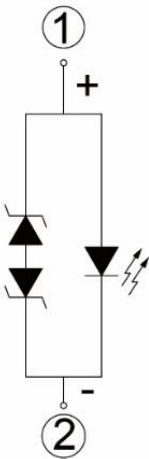
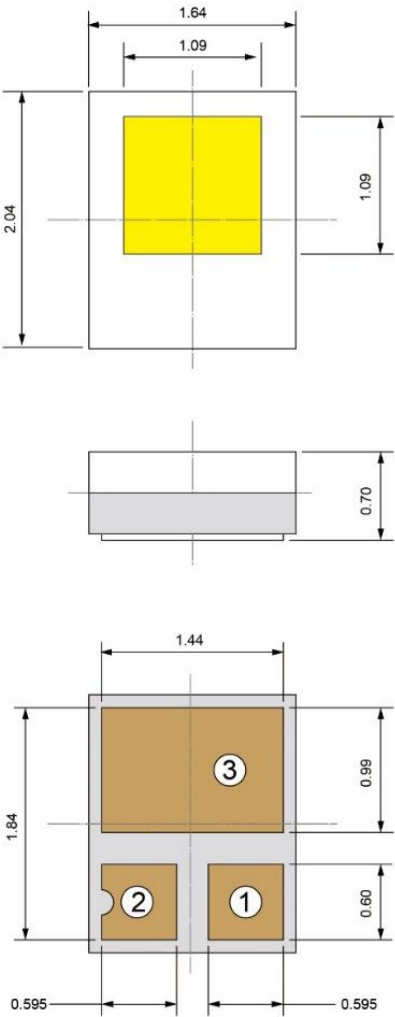
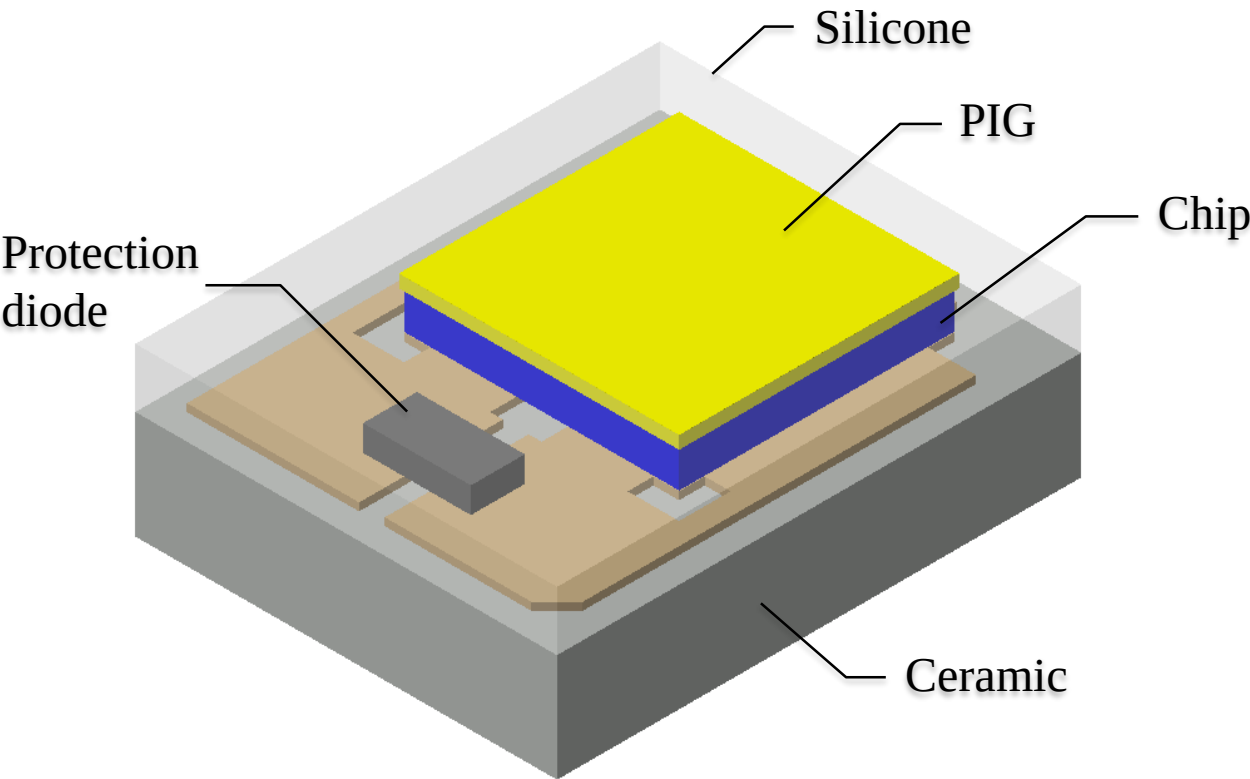
Application

Low Beam, High Beam, DRL, Position

Flux Road Map

	2022 Min /Max Spec					2023 Min /Max Spec					2024 Min /Max Spec				
Part Number	Bin code		Flux		Color	Bin code		Flux		Color	Bin code		Flux		Color
	min	Max	min	Max		min	Max	min	Max		min	Max	min	Max	
ALFS1G-C010001H-AM	D1	D2	380	500	4 bin	D1	D2	400	500	4 bin	D1	D2	400	500	4 bin
ALFS2G-C010001H-AM	D8	E1	700	860	4 bin	D8	E1	700	860	4 bin	D8	E1	700	860	4 bin
ALFS1G-PA10001H-AM	B5	B7	180	240	YAYB	B5	B7	180	240	YAYB	B5	B7	180	240	YAYB

ALFS-1G, Package Design

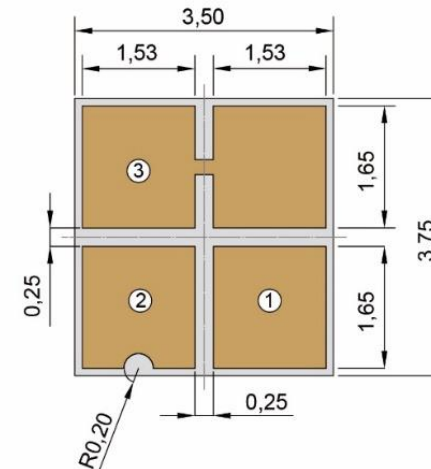
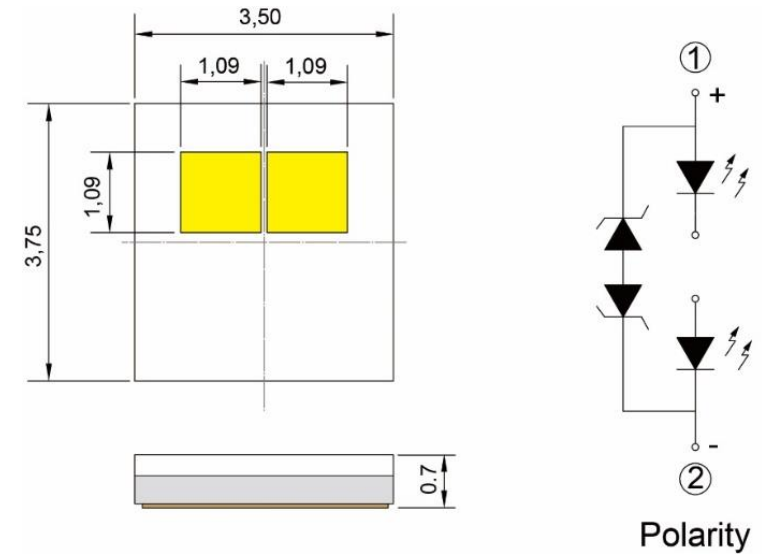
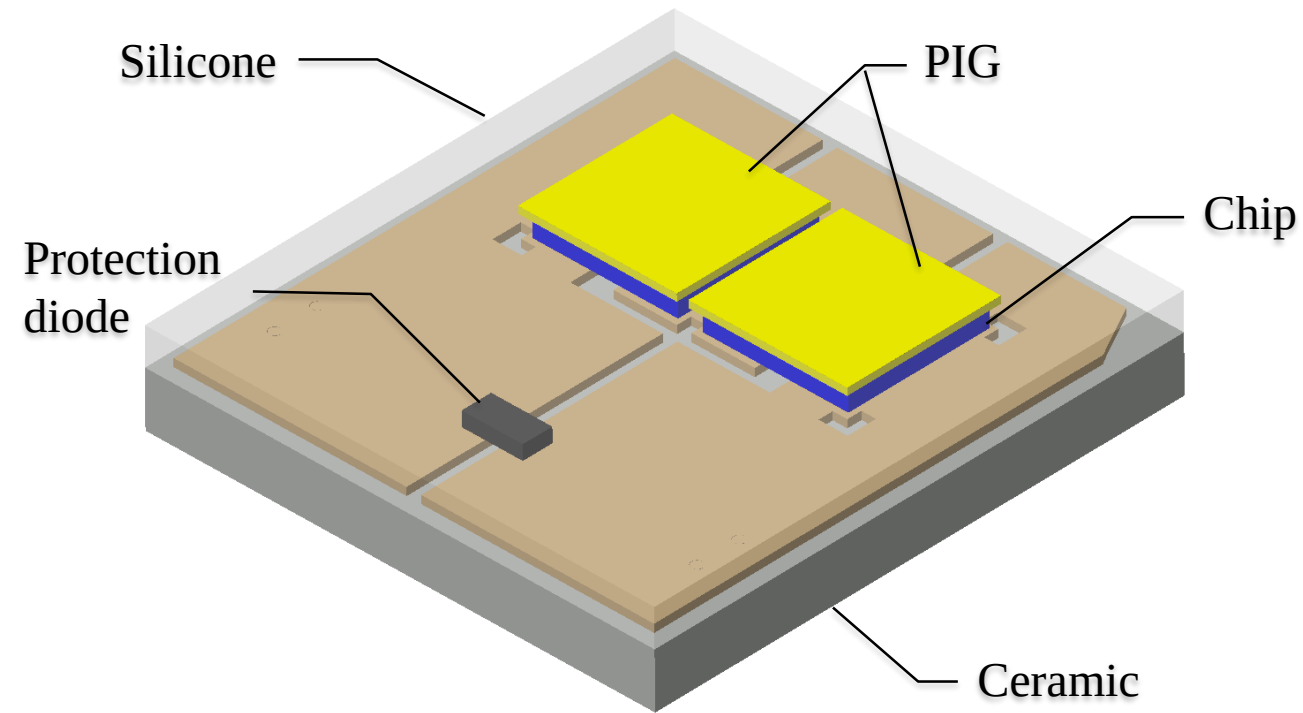


Polarity

①	Anode
②	Cathode
③	Thermal pad

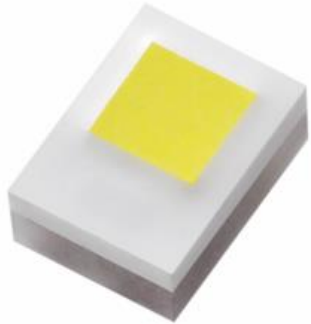
1. Dimensions are in millimeters.
2. General tolerance :0.1mm

ALFS-2G, Package Design



①	Anode
②	Cathode
③	Thermal pad

1.Dimensions are in millimeters.
2.General tolerance :0.1mm



Key Feature

- ✓ SMD type High Brightness Head lamp LED
- ✓ Chip size : 0,7 X 0,7mm (LES 0,58mm²)
- ✓ Minimum Brightness 200lm@ 700mA in 2022
- ✓ Latest Phosphor Technology (Phosphor In Glass)
- ✓ Smaller LES
- ✓ Optimized for Low budget dynamic Head lamp

Application

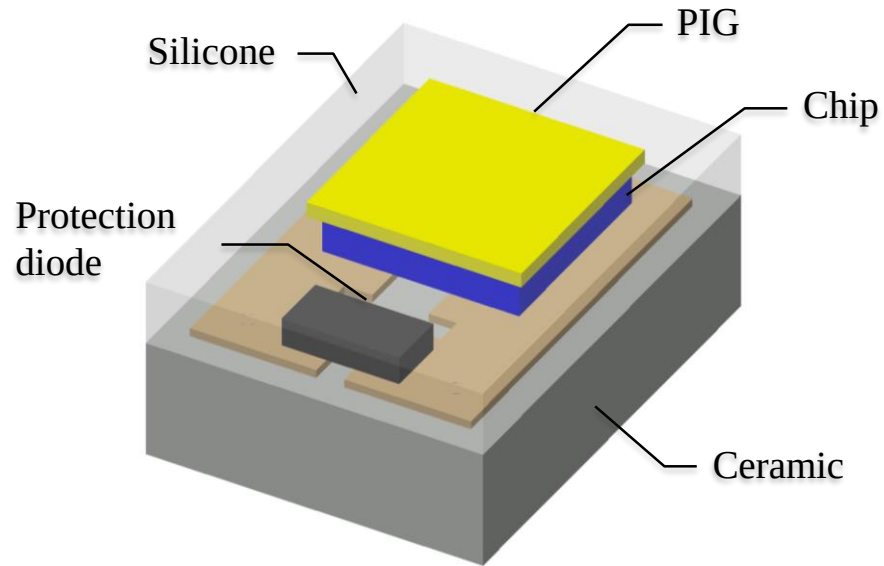
Matrix Low Beam, High Beam, DRL, Position

Electro Optical Characteristics @ Typ current / 25°C

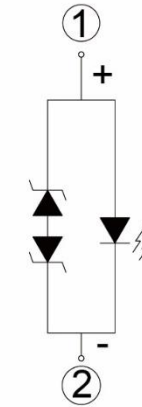
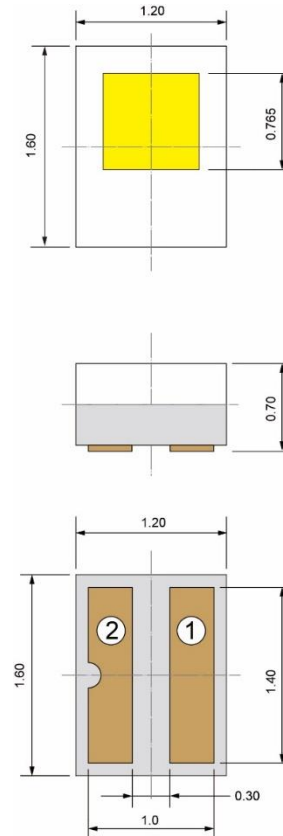
Part No.	Brightness	VF (V)	Test current	Max current	Max Tj (°C)	Viewing Angle	Typ Rth	LES(mm ²)
ALFS1E-C07001H-AM	200~240	2,9~3,8	700	1000	150	120	3.3K/W	0,58

ALFS-E, Package Design

Package Design



2D View

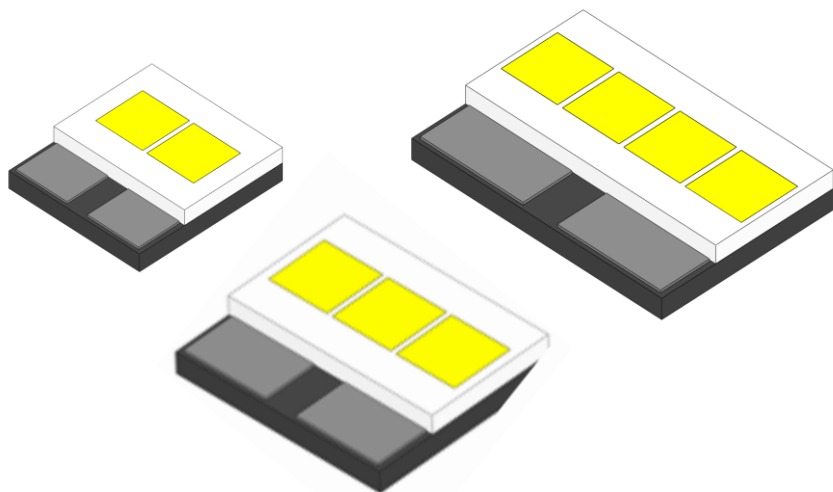


Polarity

①	Anode
②	Cathode

1. Dimensions are in millimeters.
2. General tolerance :0.1mm

ALFS HT



Key Feature

- ✓ High reliability with no wire bond
- ✓ Top Contact for direct heat sink attach.
- ✓ **Low system cost**
- ✓ **Min 410 lm/ chip. 2023**
- ✓ Target PPAP : 2Q 2023

Application

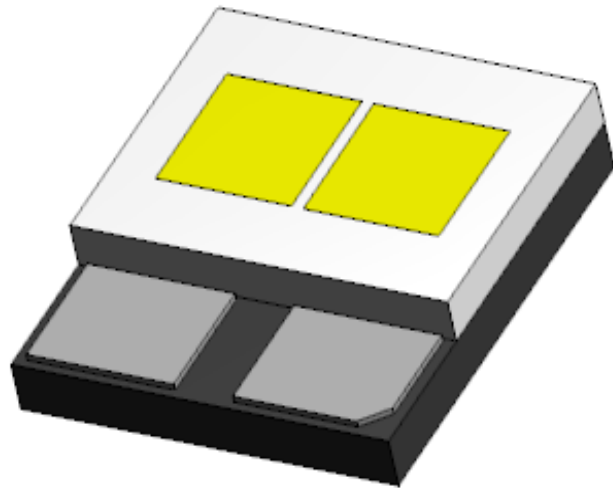
- ✓ Head lamp

Electro Optical Characteristics @ Typ current / 25°C

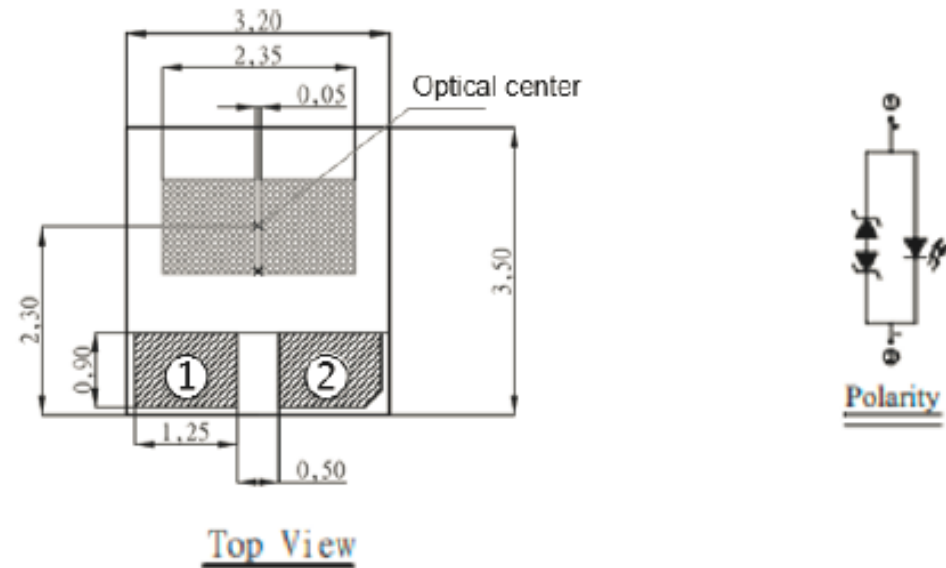
Part No.	Min Brightness (lm)	VF (V)	Test current	Max current	Max Tj (°C)	Viewing Angle	Typ Rth	LES(mm ²)	Availability
ALFS2HT-C010001H-AM	820	5,8~7,6	1000	1500	150	120	3.3K/W	2,65	SOP 2022 Oct.
ALFS3HT-C010001H-AM	1230	8,7~11,4	1000	1500	150	120	2.9K/W	3,97	SOP 2023 Jan.
ALFS4HT-C010001H-AM	1640	11,6~15,2	1000	1500	150	120	2.5K/W	5,29	SOP 2023 Jan.
ALFS5HT-C010001H-AM	2050	14,5~19,0	1000	1500	150	120	1.7K/W	6,61	SOP 2023 Jan.

ALFS HT, Package Design

Package Design

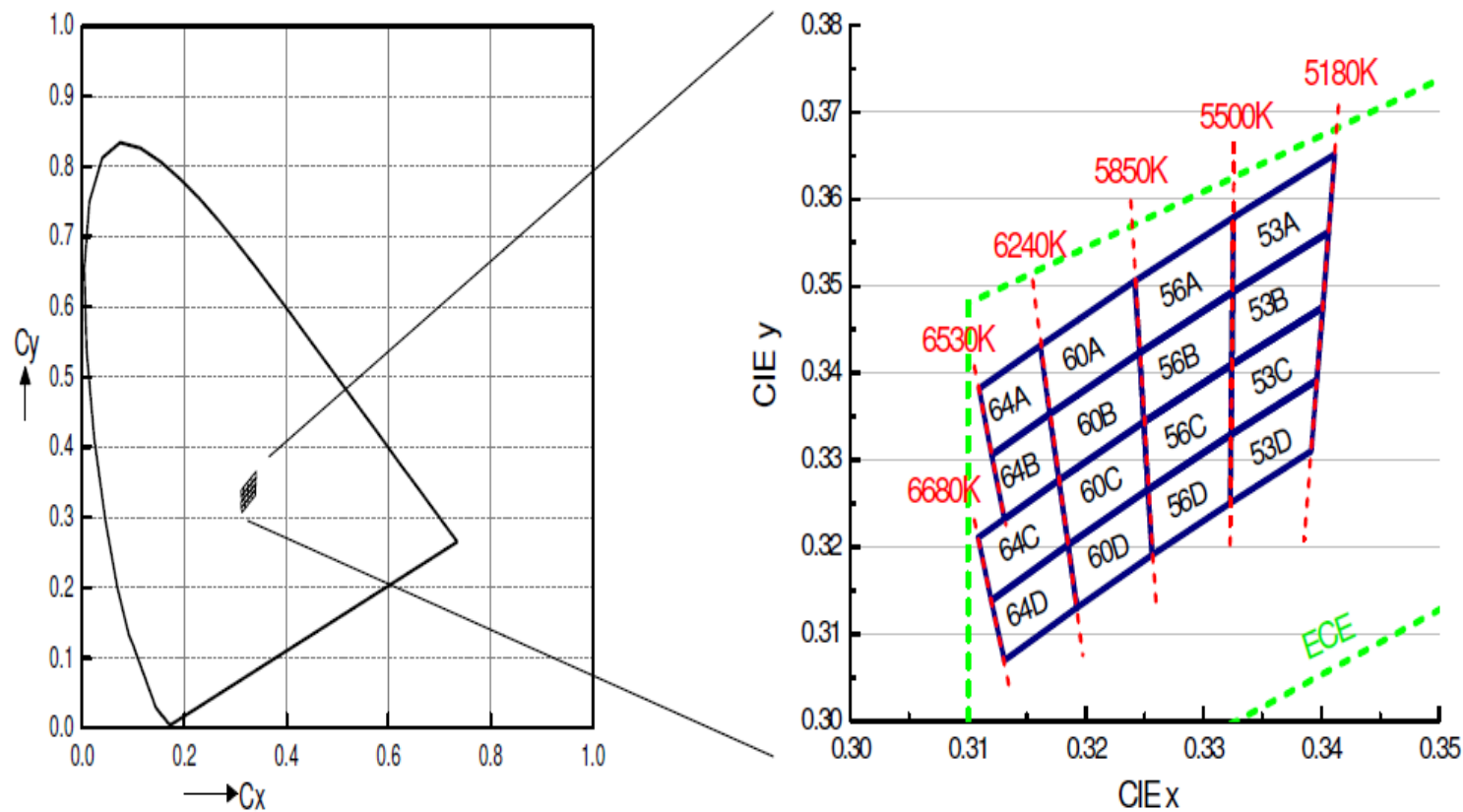


2D View

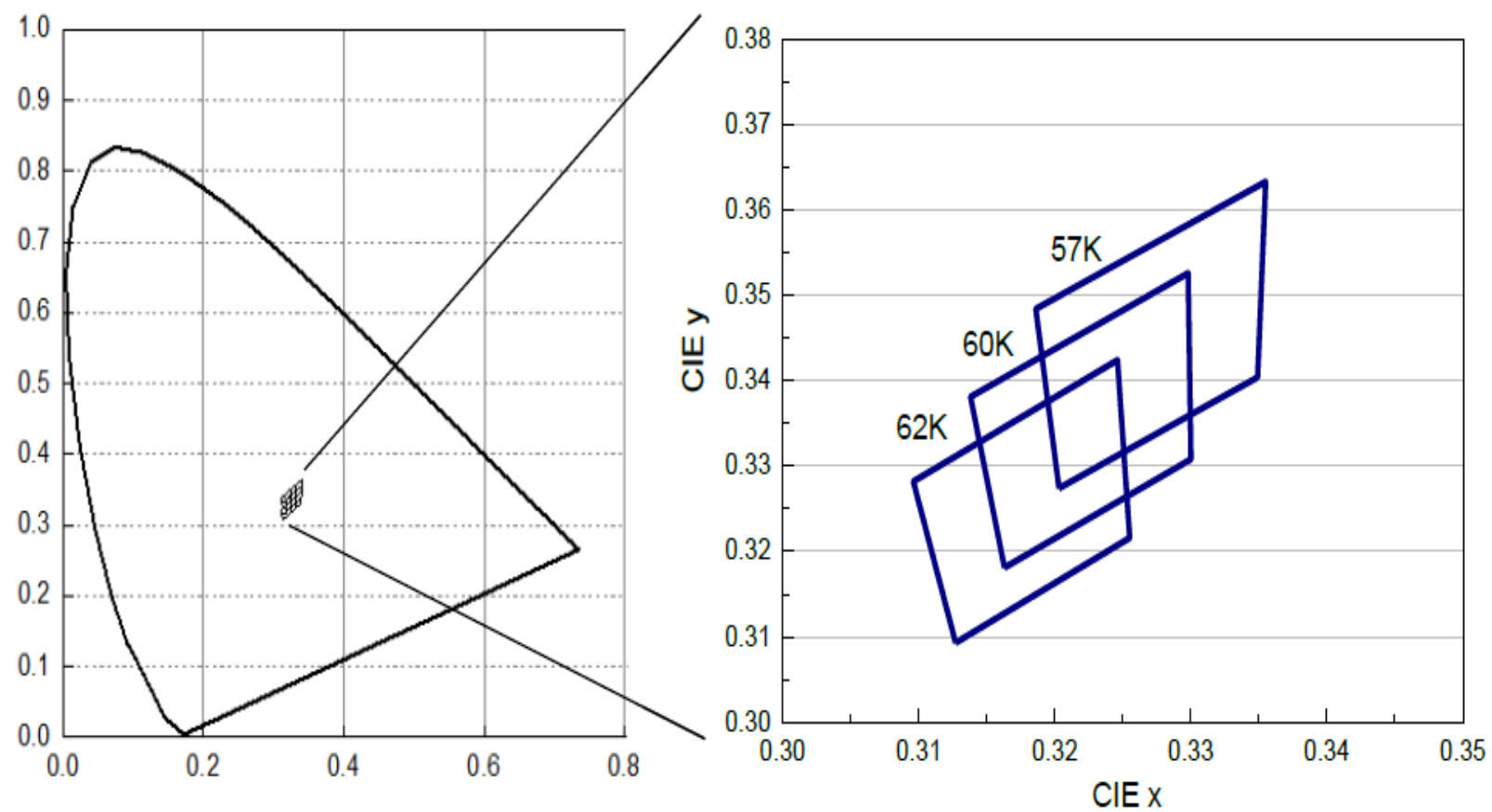


Exterior White Color Binning/ ALFS-G

ECE White Bin Structure



Exterior White Color Binning/ ALFS-E, HT



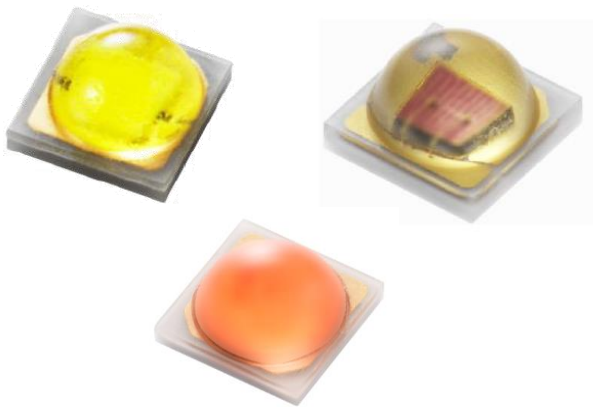
EVERLIGHT Automotive Exterior High Runners

October 2022

www.everlight.com

EVERLIGHT
— **AUTOMOTIVE**

CH-3535E



Key Feature

- ✓ Dimension : 3,5*3,5*2,3(mm)
- ✓ Silicone Dome on Ceramic Substrate
- ✓ Strong Shearing force of Lens
- ✓ **Superior lm/W**
- ✓ **Phosphor Red** available (Max T_{OPR}= 135°)

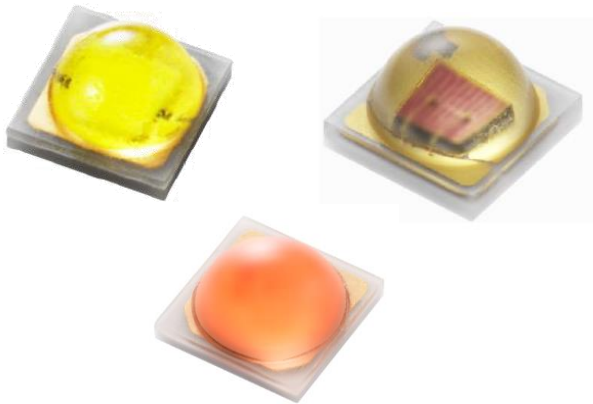
Application

Stop-tail, CHMSL

Electro Optical Characteristics @ Typ current / 25°C

Part No.	Brightness (lm)	VF	Test current (mA)	Max current (mA)	Max Tj (°C)	Typ Rth	Viewing Angle (°)	Color
CH3535E-UR3501L-AM	80~100	1.75-2.75	350	700	150	4,0K/W	120	615-627
CH3535E-PR3501L-AM	45~85	3~3,5	350	700	150	4,5K/W	120	PC RED
CH3535E-SR3501L-AM	45~85	1.75-2.75	350	700	150	4,4K/W	120	627-639

CH-3535E, Road map



Key Feature

- ✓ Dimension : 3,5*3,5*2,3(mm)
- ✓ Silicone Dome on Ceramic Substrate
- ✓ Strong Shearing force of Lens
- ✓ **Superior lm/W**
- ✓ **Phosphor Red** available (Max T_{OPR} = 135°)

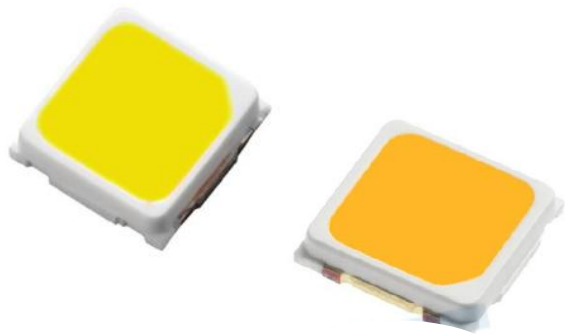
Application

Stop-tail, CHMSL

Flux Road Map (2022~2024)

		2022 Min /Max Spec					2023 Min /Max Spec					2024 Min /Max Spec				
Color	Part Number	Bin code		Flux		Color	Bin code		Flux		Color	Bin code		Flux		Color
		min	Max	min	Max		min	Max	min	Max		min	Max	min	Max	
Red	CH3535E-UR3501L-AM	F8	J1	80	105	615~627	F8	J1	80	105	615~627	F8	J1	80	105	615~627
PC Red	CH3535E-PR3501L-AM	F4	F7	45	75		F4	F8	45	85		F4	F8	45	85	
Super Red	CH3535E-SR3501L-AM	F4	F7	45	80	627~639	F4	F8	45	85	627~639	F4	F8	45	85	627~639

XI-3030



Key Feature

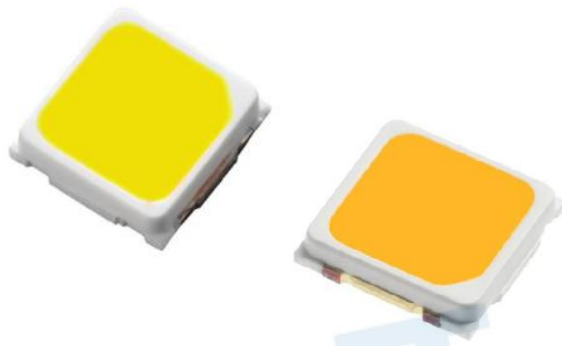
- ✓ Dimensions : 3,0*3,0*0,63(mm)
- ✓ **Low Thermal Mismatch (EMC Package)**
- ✓ Both 0,5W and 1W from the same package
- ✓ Cost Effective Mid-High Power solution

Application

DRL, Position, Fog Lamp, Back up, Stop-tail, Turn

Electro Optical Characteristics @ Typ current / 25°C

Part No.	Brightness Bin (lm)	VF	Test current (mA)	Max current (mA)	Max Tj (°C)	Typ Rth	Viewing Angle (°)	White
XI3030-C03501H-AM	J4J7 (130~170)	2.5-3.5	350mA	500	150	10K/W	120	White
XI3030-C01501M-AM	F4F7 (45~80)	2.5-3.5	150mA	350	150	13K/W	120	White
XI3030-PA3501H-AM	F7F9 (70~95)	2.5-3.5	350mA	500	150	12K/W	120	ECE Yellow
XI3030-PA1501M-AM	F2F4 (33~52)	2.5-3.5	150mA	350	150	30K/W	120	ECE Yellow



Key Feature

- ✓ Dimensions : 3,0*3,0*0,63(mm)
- ✓ **Low Thermal Mismatch (EMC Package)**
- ✓ Both 0,5W and 1W from the same package
- ✓ Cost Effective Mid-High Power solution

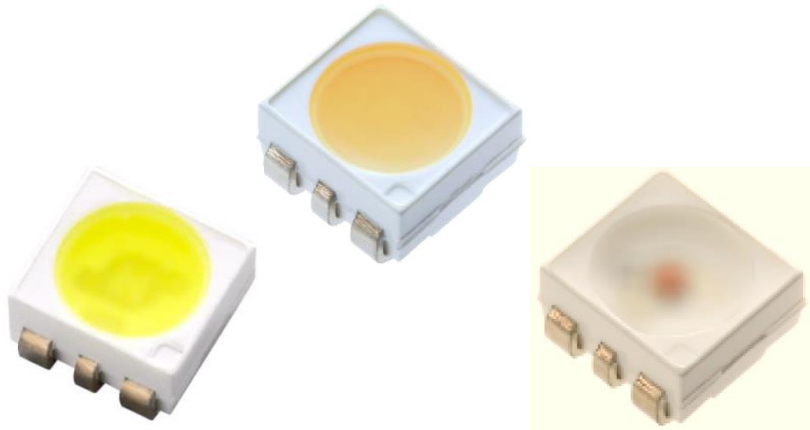
Application

DRL, Position, Fog Lamp, Back up, Stop-tail, Turn

Flux Road Map (2022~2024)

Part Number	2022 Min /Max Spec					2023 Min /Max Spec					2024 Min /Max Spec				
	Bin code		Flux		Color	Bin code		Flux		Color	Bin code		Flux		Color
	min	Max	min	Max		min	Max	min	Max		min	Max	min	Max	
XI3030-C03501H-AM	J4	J7	130,0	160,0	4 bin	J5	J7	140,0	170,0	4 bin	J6	J7	150,0	170,0	4 bin
XI3030-C01501M-AM	F4	F7	45,0	80,0	4 bin	F5	F7	52,0	80,0	4 bin	F5	F7	52,0	80,0	4 bin
XI3030-PA3501H-AM	F7	F9	70,0	95,0	YAYB	F7	F9	70,0	95,0	YAYB	F8	F9	80,0	95,0	YAYB
XI3030-PA1501M-AM	F2	F4	33,0	52,0	YAYB	F2	F4	33,0	52,0	YAYB	F2	F4	33,0	52,0	YAYB

PLCC-6

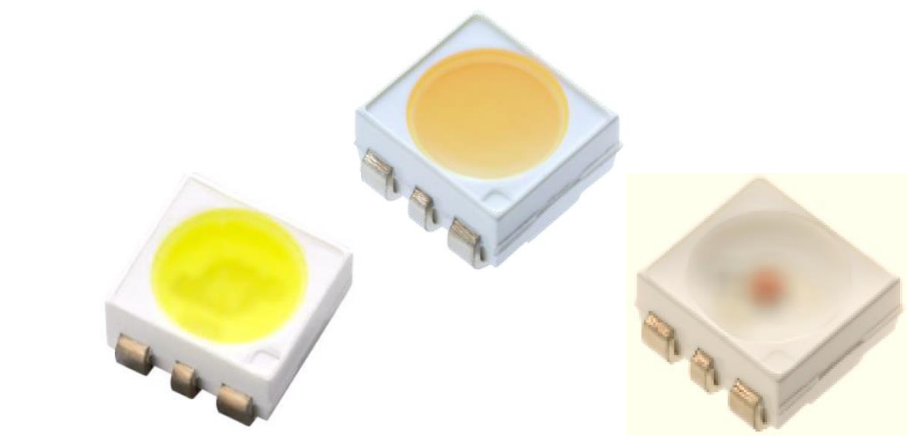


Key Feature	✓ Dimension : 3.4*3.4*1.8 mm ✓ Standard PLCC6 package ✓ Pin to pin solution ✓ Sulfur Robust ✓ All automotive exterior colors available
Application	DRL, Position, Turn Signal, Stop-tail, CHMSL

Electro Optical Characteristics @ Typ current / 25°C

Part No.	Brightness Bin (cd/lm)	VF	Test current (mA)	Max current (mA)	Max Tj (°C)	Max Rth	Viewing Angle (°)	Color
A09K-C71501H-AM	9~14cd (28~44,6lm)	2,75~3,75	150mA	30K/W	125	42K/W	120	White
A09K-UY1501H-AM	5,6cd~9cd (17,5~28lm)	1,75~2,75	150mA	50K/W	125	50K/W	120	582-594
A09K-PA1501H-AM	5,6cd~11,2cd (17,5~35lm)	2,75~3,75	150mA	35K/W	125	45K/W	120	ECE Yellow
A09K-UR1501H-AM	7,1cd~11,2cd (22~35lm)	1,75~2,75	150mA	50K/W	125	50K/W	120	612-624
A09K-SR1501H-AM	4,5~7cd (15~22lm)	1,75~3,0	150mA	50K/W	125	50K/W	120	627-639

PLCC-6



Key Feature	✓ Dimension : 3.4*3.4*1.8 mm ✓ Standard PLCC6 package ✓ Pin to pin solution ✓ Sulfur Robust ✓ All automotive exterior colors available
Application	DRL, Position, Turn Signal, Stop-tail, CHMSL

Flux Road Map (2022~2024)

Part Number	2022 Min /Max Spec					2023 Min /Max Spec					2024 Min /Max Spec				
	Bin code		Flux		Color	Bin code		Flux		Color	Bin code		Flux		Color
	min	Max	min	Max		min	Max	min	Max		min	Max	min	Max	
A09K-C71501H-AM	EB	FA	28,3	44,0	6 Bins	EB	FA	28,3	44,0	6 Bins	EB	FA	28,3	44,0	6 Bins
A09K-UY1501H-AM	DB	EA	17,5	28,3	588~595	DB	EA	17,5	28,3	588~595	DB	EA	17,5	28,3	588~595
A09K-PA1501H-AM	DB	EB	17,0	27,3	YAYB	DB	EB	17,0	27,3	YAYB	DB	EB	17,0	27,3	YAYB
A09K-UR1501H-AM	EA	EB	22,0	35,0	612~624	EA	EB	22,0	35,0	612~624	EA	EB	22,0	35,0	612~624
A09K-SR1501H-AM	DA	DB	15,2	22,0	627~637	DA	DB	15,2	22,0	627~637	DA	DB	15,2	22,0	627~637

PLCC-4



Key Feature

- ✓ Dimension : 3.5*2.8*1.85(mm)
- ✓ Compatible standard PLCC4 package
- ✓ Pin to Pin to other PLCC 4
- ✓ Sulfur Robust
- ✓ All automotive exterior colors available
- ✓ Hyper Red color (621~630nm)

Application

DRL, Position, Turn Signal, Stop-tail

Electro Optical Characteristics @ Typ current / 25°C

Part No.	Brightness bin cd/(lm)	VF	Test current (mA)	Max current (mA)	Max Tj (°C)	Max Rth	Viewing Angle (°)	Color
67-41-C70301H-AM	2,2~4,5cd	2.75-3.75	30mA	60mA	125	100K/W	120	White
67-41-UY0501H-AM	1,4~2,8cd	1.75-2.75	50mA	70mA	125	100K/W	120	585-594
67-41-PA0601H-AM	2,8~5,6cd	2.75-3.75	60mA	70mA	125	100K/W	120	ECE Yellow
67-41-UR0501H-AM	2,8~3,5cd	1.75-2.75	50mA	70mA	125	100K/W	120	612-624
67-41-HR0501H-AM	1,4-4,5cd	1.75-2.75	50mA	70mA	125	100K/W	120	621~630
67-41-SR0501H-AM	1,4~2,2cd	1.75-2.75	50mA	70mA	125	100K/W	120	627-639

PLCC-4



Key Feature

- ✓ Dimension : 3.5*2.8*1.85(mm)
- ✓ Compatible standard PLCC4 package
- ✓ Pin to Pin to other PLCC 4
- ✓ Sulfur Robust
- ✓ All automotive exterior colors available
- ✓ Hyper Red color (621~630nm)

Application

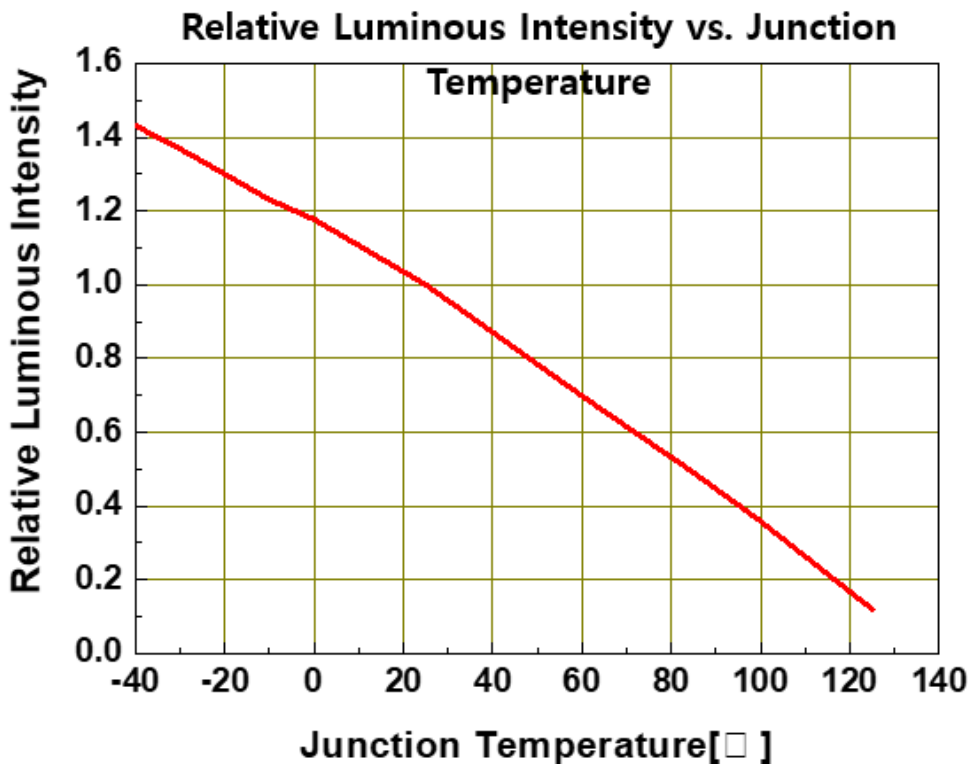
DRL, Position, Turn Signal, Stop-tail

Flux Road Map (2022~2024)

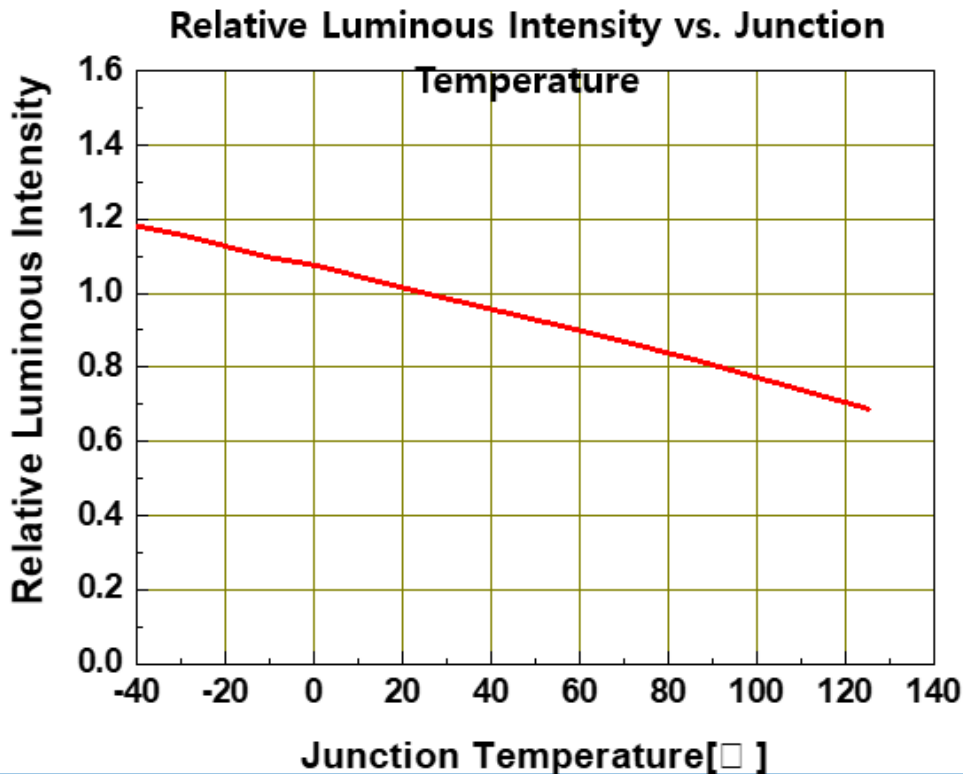
Part Number	2022 Min /Max Spec					2023 Min /Max Spec					2024 Min /Max Spec				
	Bin code		Flux		Color	Bin code		Flux		Color	Bin code		Flux		Color
	min	Max	min	Max		min	Max	min	Max		min	Max	min	Max	
67-41-C70301H-AM	CA	CB	8,8	14,0	6 Bins	CA	CB	8,8	14,0	6 Bins	CA	CB	8,8	14,0	6 Bins
67-41-UY0501H-AM	BB	CA	7,0	11,0	583~595	BB	CA	7,0	11,0	583~595	BB	CA	7,0	11,0	583~595
67-41-PA0601H-AM	CA	DA	8,8	17,6	8591	CA	DA	8,8	17,6	8591	CA	DA	8,8	17,6	8591
67-41-UR0501H-AM	CA	DA	8,8	17,6	612~624	CA	DA	8,8	17,6	612~624	CB	DA	8,8	17,6	612~624
67-41-HR0501H-AM	BB	CB	7,0	14,0	621~630	BB	CB	7,0	14,0	621~630	BB	CB	7,0	14,0	621~630
67-41-SR0501H-AM	AB	BA	4,3	7,0	627~639	AB	BA	4,3	7,0	627~639	AB	BA	4,3	7,0	627~639

67-41-PA comparison

Normal AlInGaP Yellow
Low efficiency at high Temp.



Phosphor Converted Amber
Higher brightness at high Temp.



PLCC-3 with Lens



Key Feature

- ✓ PLCC 3 with Lens
- ✓ Viewing angle optimized with 30/60
- ✓ Package size (with Lens)
3,5 X 2,8 X 3,35mm (30 degree)
3,5 X 2,8 X 3,0mm (60 degree)
- ✓ Sulfur Robust (Epoxy Lens)
- ✓ **Verified with Thermal shock (OEM requirement)**

Application

Turn-Signal, CHMSL, Stop-tail

Electro Optical Characteristics @ Typ current / 25°C

Part No.	Brightness (cd)	VF	Test current (mA)	Max current (mA)	Max Tj (°C)	Max Rth	Viewing Angle (°)	Color
67-31EP6-UY0500H-AM	CBEB (3,5~11,2cd)	1,75~2,75	50mA	50	125	100K/W	60	582-594
67-31EP3-UY0500H-AM	DBFB (5,6~18cd)	2,75~3,75	50mA	50	125	100K/W	30	582-594
67-31EP6-UR0500H-AM	CBEB (3,5~11,2cd)	1,75~2,75	50mA	50	125	100K/W	60	612-624
67-31EP3-UR0500H-AM	DBFB (5,6~18cd)	1,75~3,0	50mA	50	125	100K/W	30	612-624

PLCC-3 with Lens



Key Feature

- ✓ PLCC 3 with Lens
- ✓ Viewing angle optimized with 30/60
- ✓ Package size (with Lens)
 - 3,5 X 2,8 X 3,35mm (30 degree)
 - 3,5 X 2,8 X 3,0mm (60 degree)
- ✓ Sulfur Robust (Epoxy Lens)
- ✓ **Verified with Thermal shock (OEM requirement)**

Application

Turn-Signal, CHMSL, Stop-tail

Flux Road Map (2022~2024)

Part Number	2022 Min /Max Spec					2023 Min /Max Spec					2024 Min /Max Spec				
	Bin code		Flux		Color	Bin code		Flux		Color	Bin code		Flux		Color
	min	Max	min	Max		min	Max	min	Max		min	Max	min	Max	
67-31EP6-UY0500H-AM	CB	EB	3550 (mcd)	11200 (mcd)	582~594	CB	EB	3550 (mcd)	11200 (mcd)	582~594	CB	EB	3550 (mcd)	11200 (mcd)	582~594
67-31EP3-UY0500H-AM	DB	FB	5600 (mcd)	18000 (mcd)	582~594	DB	FB	5600 (mcd)	18000 (mcd)	582~594	DB	FB	5600 (mcd)	18000 (mcd)	582~594
67-31EP6-UR0500H-AM	CB	EB	3550 (mcd)	11200 (mcd)	612~624	CB	EB	3550 (mcd)	11200 (mcd)	612~624	CB	EB	3550 (mcd)	11200 (mcd)	612~624
67-31EP3-UR0500H-AM	DB	FB	5600 (mcd)	18000 (mcd)	612~624	DB	FB	5600 (mcd)	18000 (mcd)	612~624	DB	FB	5600 (mcd)	18000 (mcd)	612~624



Key Feature

- ✓ Dimension : 3.5*2.8*1.85(mm)
- ✓ Compatible standard PLCC2 package
- ✓ Sulfur Robust
- ✓ Suitable for Low budget application

Application

CHMSL, Stop-tail

Electro Optical Characteristics @ Typ current / 25°C

Part No.	Brightness (cd/lm)	VF	Test current (mA)	Max current (mA)	Max Tj (°C)	Max Rth	Viewing Angle (°)	Color
67-21R-UR0301H-AM	V2AB	1,75~2,75	30	50	125	280K/W	120	612~627
67-21R-SR0301H-AM	V2AB	1,75~2,75	30	50	125	280K/W	120	627~636

PLCC-2 , Road map



Key Feature

- ✓ Dimension : 3.5*2.8*1.85(mm)
- ✓ Compatible standard PLCC2 package
- ✓ Sulfur Robust
- ✓ Suitable for Low budget application

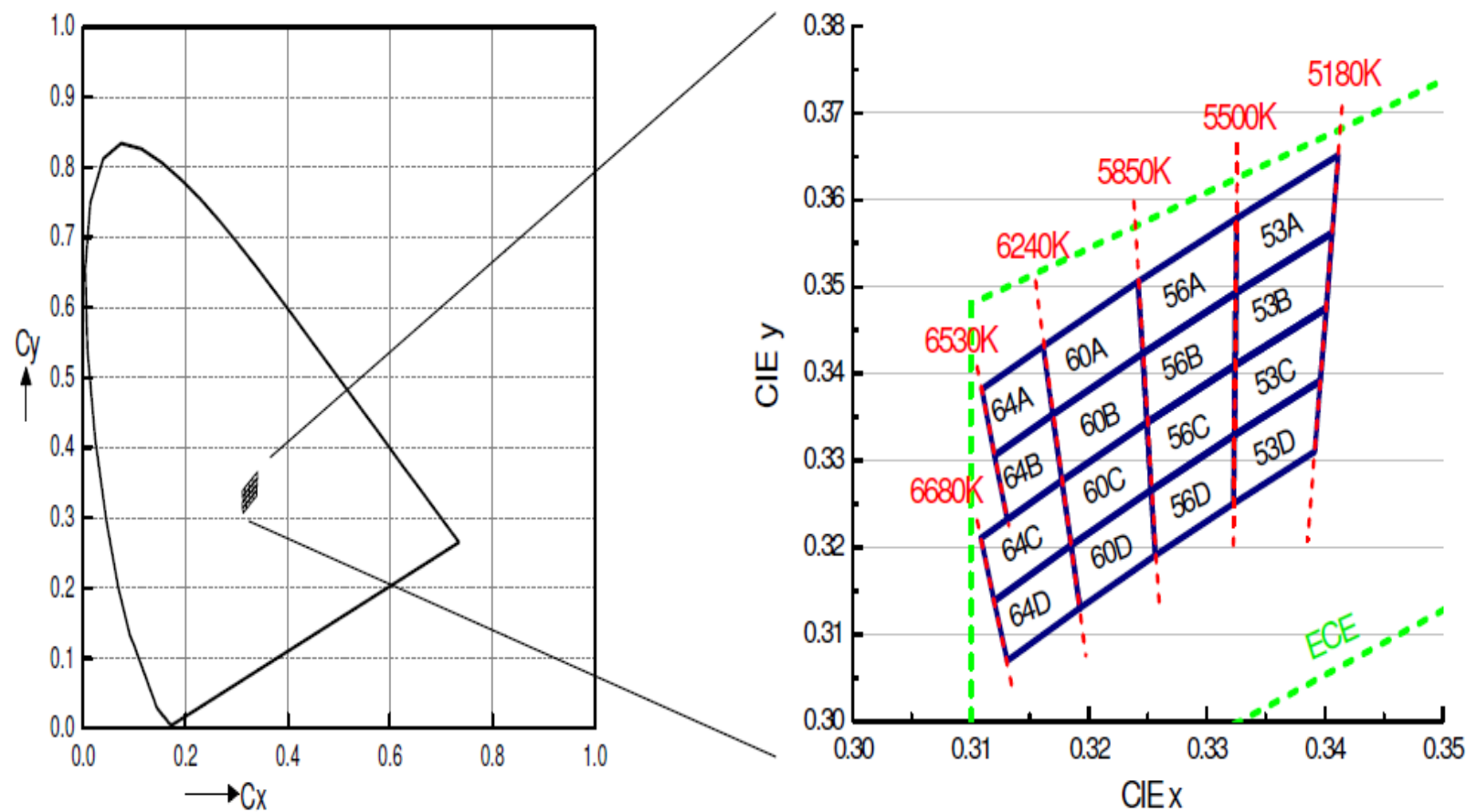
Application

CHMSL, Stop-tail

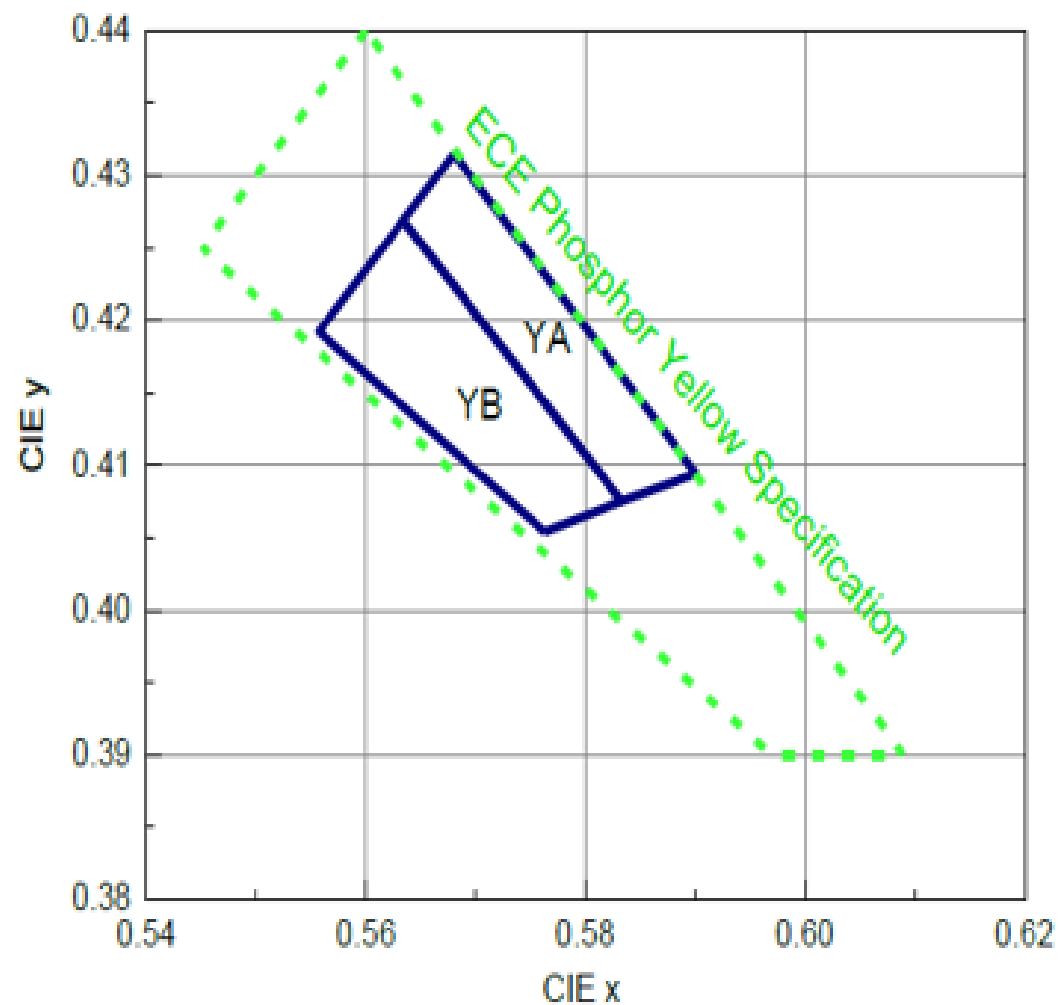
Flux Road Map (2022~2024)

	2022 Min /Max Spec					2023 Min /Max Spec					2024 Min /Max Spec				
Part Number	Bin code		Flux		Color	Bin code		Flux		Color	Bin code		Flux		Color
	min	Max	min	Max		min	Max	min	Max		min	Max	min	Max	
67-21R-UR0301H-AM	V2	AB	2,8	5,6	612-624	AA	BA	3,5	7	612-624	AA	BA	3,5	7	612-624
67-21R-SR0301H-AM	V2	AB	2,8	5,6	627-636	AA	BA	3,5	7	627-636	AA	BA	3,5	7	627-636

Exterior White Color Binning



Exterior Phosphor Amber Color Binning



EVERLIGHT Automotive Exterior New Product

October 2022

www.everlight.com



Packing technology Trend

EL Mini Top view LED



2.2x1.4x1.1

EL Top view LED



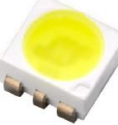
3.5x2.8x1.9

EL Power Top view LED



3.5x2.8x1.9

EL Advanced Top view LED



3.3 x 3.4 x 1.8

1. **Smaller in size**
2. **Slim design for optical efficiency improvement**
2. **Reduce thermal resistance**
3. **Various power with standardized footprint and optical center.**

EL 1608



1.6x0.8x0.6

EL 2214



2.2x1.4x0.7

EL 2820



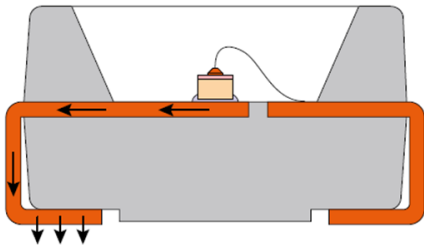
2.8x2.0x0.6

XI 3030

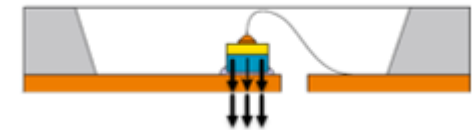


3.0x3.0 x0.6

PLCC



Slim package



2820 : Mid~High Power



Key Feature

Application

- ✓ Dimension : 2,8 X 2,0 X 0,6mm
- ✓ AECQ102
- ✓ Sample (C sample) available June 2022
- ✓ One package with different power (200mA, 300mA, 350mA and 700mA)
- ✓ Stop, Tail, DRL Turn signal etc...

Electro Optical Characteristics @ Typ current / 25°C

Part No.	Brightness (lm)	VF	Test current	Max current	Max Tj (°C)	Max Rth real	Viewing Angle (°)	Color	Availability	Addition Reliability test plan
2820-C03001H-AM	60~90 lm	2.75-3.5	300mA	350mA	150	25	120	5180-6680	Available	
2820-PA3001H-AM	39~60 lm	2.75-3.5	300mA	350mA	150	25	120	Cx0.57/ Cy0.42	Available	
2820-UY2001M-AM	23~45 lm	1.75-2.75	200mA	250mA	150	32	120	582-594	Available	USCAR-33
2820-UY3501MAM	45~70 lm	1.75-2.75	350mA	500mA	150	25	120	582-594	Available	USCAR-33
2820-UR2001M-AM	27~45 lm	1.75-2.75	200mA	250mA	150	18.2	120	612-627	Available	USCAR-33
2820-UR3501H-AM	52~90 lm	1.75-2.75	350mA	500mA	150	18.2	120	612-627	Available	USCAR-33
2820-UR7001H-AM	110 ~ 150 lm	2.25~3.25	700mA	1A	150	10	120	612-624	SOP 2022 Aug	
2820-SR2001MAM	20 ~33 lm	1.75-2.75	200mA	250mA	150	12.8	120	627-639	Available	USCAR-33
2820-SR3501H-AM	33~60 lm	1.75-2.75	350mA	500mA	150	12.8	120	627-639	Available	USCAR-33

2820 : Mid~High Power



Key Feature

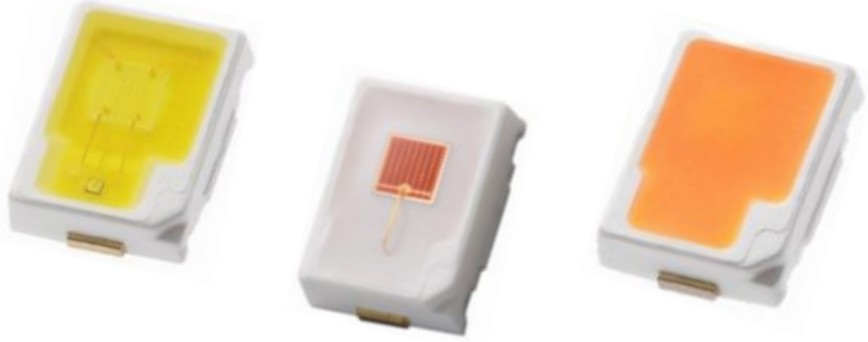
- ✓ Dimension : 2,8 X 2,0 X 0,6mm
- ✓ AECQ102
- ✓ Sample (C sample) available June 2022
- ✓ One package with different power (200mA, 300mA, 350mA and 700mA)
- ✓ Stop, Tail, DRL Turn signal etc...

Application

Flux Road Map (2022~2024)

Part Number	2022 Min /Max Spec					2023 Min /Max Spec					2024 Min /Max Spec				
	Bin code		Flux		Color	Bin code		Flux		Color	Bin code		Flux		Color
	min	Max	min	Max		min	Max	min	Max		min	Max	min	Max	
2820-C03001M-AM	F6	F8	60	90	5180-6680	F6	F8	60	90	5180-6680	F7	F9	70	100	5180-6680
2820-PA3001M-AM	F3	F5	39	60	YAYB	F3	F5	39	60	YAYB	F4	F6	45	70	YAYB
2820-UY2001M-AM	E9	F3	23	45	582-594	E9	F3	23	45	582-594	F1	F4	27	52	582-594
2820-UY3501MAM	F4	F6	45	70	582-594	F4	F6	45	70	582-594	F5	F7	52	80	582-594
2820-UR2001M-AM	F1	F3	27	45	612-627	F1	F3	27	45	612-627	F2	F4	33	52	612-627
2820-SR2001MAM	E8	F1	20	33	627-639	E9	F1	23	33	627-639	E9	F2	23	39	627-639
2820-UR3501H-AM	F5	F8	52	90	612-627	F5	F8	52	90	612-627	F6	F8	60	90	612-627
2820-SR3501H-AM	F2	F5	33	60	627-639	F3	F5	39	60	627-639	F3	F6	39	70	627-639
2820-UR7001H-AM	J2	J5	110	150	612-624	J3	J5	120	150	612-624	J3	J6	120	160	612-624

2820 : Mid~High Power

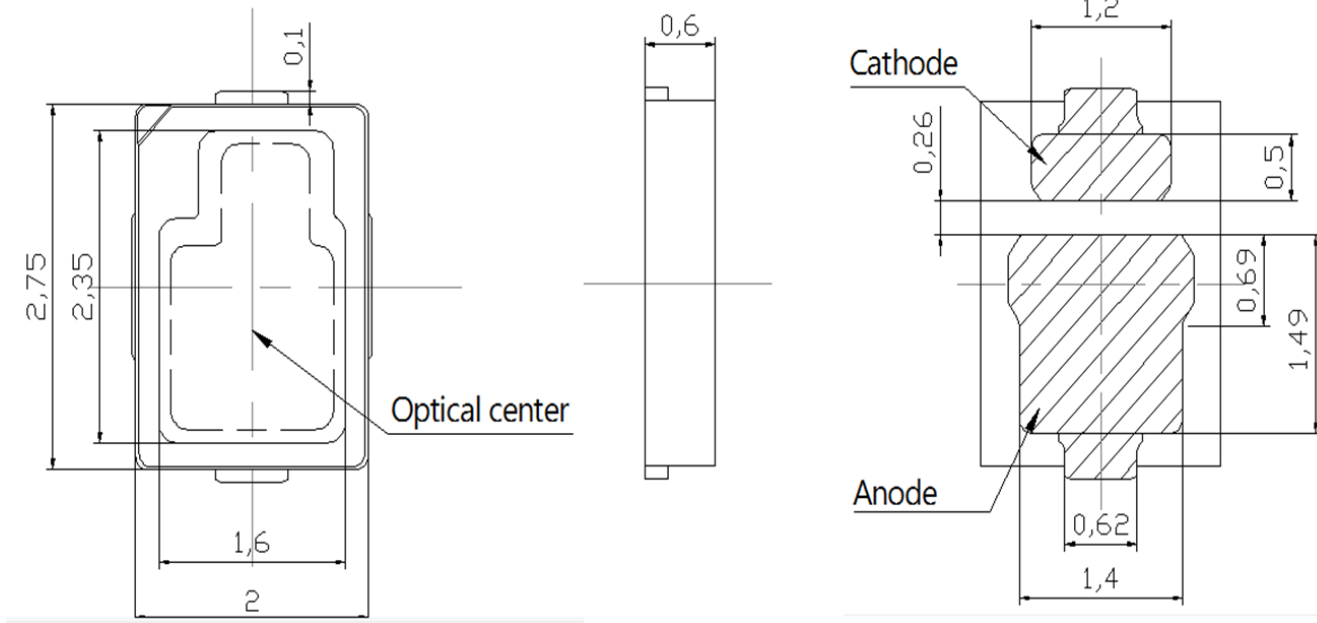


Key Feature

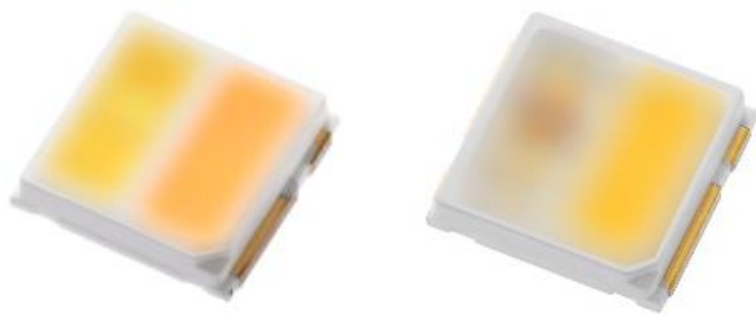
- ✓ Dimension : 2,8 X 2,0 X 0,6mm
- ✓ AECQ102
- ✓ Sample (C sample) available June 2022
- ✓ One package with different power (200mA, 300mA, 350mA and 700mA)
- ✓ Stop, Tail, DRL Turn signal etc...

Application

Mechanical dimension (in mm)



3735 Dual color



Key Feature

- ✓ 3,7 x 3,5 x 0.8 mm
- ✓ Dual color design for signaling (white/yellow & red/yellow)
- ✓ Au plating L/F
- ✓ AEC-Q102

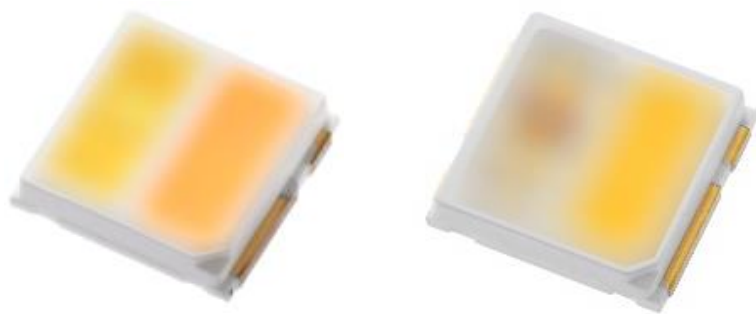
Application

- ✓ Turn + Position (DRL), Turn + Reverse light
- ✓ Stop + Turn

Electro Optical Characteristics @ Typ current / 25°C

Part No.	Brightness Bin (lm)	VF	Test current (mA)	Max current (mA)	Max Tj (°C)	Max Rth real	Viewing Angle (°)	Color	Availability
3735-C0PA1501H-AM	52 / 23 lm (White/PA)	2.75-3.5	150mA	200mA	150	40	120	5180-6680/ Cx 0.57/ Cy 0.42	Available
3735-C0PA2501H-AM	70 / 33 lm (White/PA)	2.75-3.5	250mA	350mA	150	25	120	5180-6680/ Cx 0.57/ Cy 0.42	SOP 2022 Sep
3735-UYUR3501H-AM	45 / 60 lm (Yellow/Red)	1.75-2.75	350mA	500mA	150	TBC	120	586~592nm/ 612~624 nm	SOP 2022 Sep

3735 Dual color



Key Feature

- ✓ 3,7 x 3,5 x 0.8 mm
- ✓ Dual color design for signaling (white/yellow & red/yellow)
- ✓ Au plating L/F
- ✓ AEC-Q102

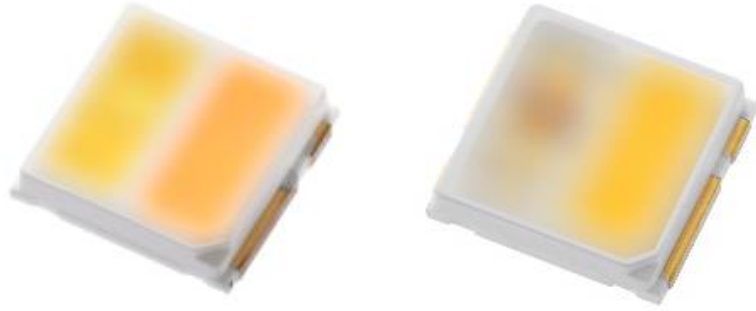
Application

- ✓ Turn + Position (DRL), Turn + Reverse light
- ✓ Stop + Turn

Flux Road Map (2022~2024)

	2022 Min /Max Spec					2023 Min /Max Spec					2024 Min /Max Spec				
Part Number	Bin code		Flux		Color	Bin code		Flux		Color	Bin code		Flux		Color
	min	Max	min	Max		min	Max	min	Max		min	Max	min	Max	
3735-C0PA1501H-AM	F5	F6	52	70	5180-6680	F5	F6	52	70	5180-6680	F6	F7	60	70	5180-6680
	E9	F1	23	33	YAYB	E9	F1	23	33	YAYB	F1	F2	27	39	YAYB
3735-C0PA2501H-AM	F7	F8	70	80	5180-6680	F7	F8	70	80	5180-6680	F8	F9	80	100	5180-6680
	F2	F5	33	60	YAYB	F2	F5	33	60	YAYB	F3	F5	39	60	YAYB
3735-UYUR3501H-AM	F4	F5	45	60	582-594	F4	F5	45	60	582-594	F5	F6	45	70	582-594
	F6	F8	60	80	612-624	F6	F8	60	80	612-624	F7	F9	70	100	612-624

3735 Dual color



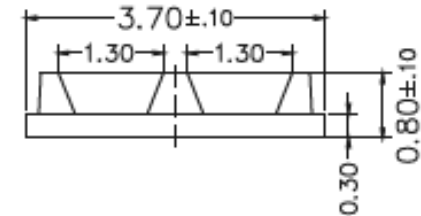
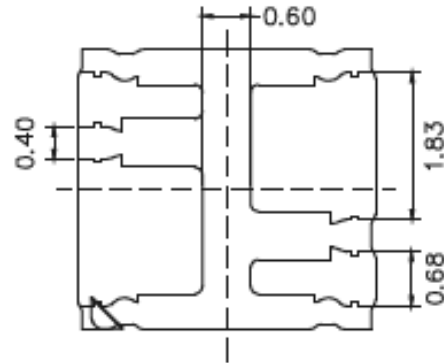
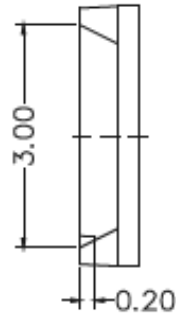
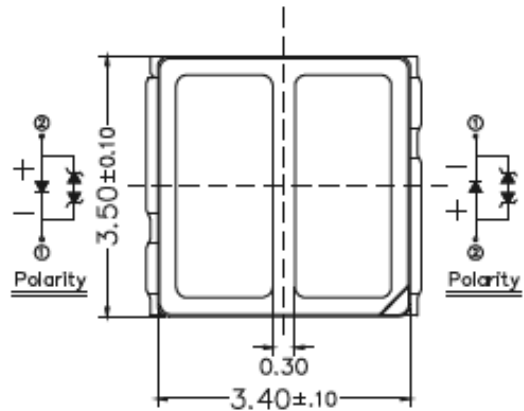
Key Feature

- ✓ 3,7 x 3,5 x 0.8 mm
- ✓ Dual color design for signaling (white/yellow & red/yellow)
- ✓ Au plating L/F
- ✓ AEC-Q102

Application

- ✓ Turn + Position (DRL), Turn + Reverse light
- ✓ Stop + Turn

Mechanical dimension (in mm)



CH1210E



Size	✓ 1.2 x 1.0 x 0.8 (mm)
Key Feature	✓ Very small LES(0,55X 0,55, LES 0,3mm ²) ✓ Max Tj 150°C ✓ AEC-Q102 Qualified
Application	✓ Ambient Lighting ✓ Various Exterior signature/ light function ✓ Signal/ Signature lamp for E vehicle

Electro Optical Characteristics @ Typ current / 25°C

Part No.	Brightness (cd/lm)	VF	Test current (mA)	Max current (mA)	Max Tj (°C)	Typ Rth (K/W)	Viewing Angle (°)	Color
CH1210E-C00801H-AM	23 ~39	2.75-3.75	80	120	150	26	120	ECE White
CH1210E-PA0801H-AM	13~23	2.75-3.75	80	120	150	35	120	Phosphor Yellow
CH1210E-PR0801H-AM	6~13	2.75-3.75	80	120	150	35	120	Phosphor Red



Size

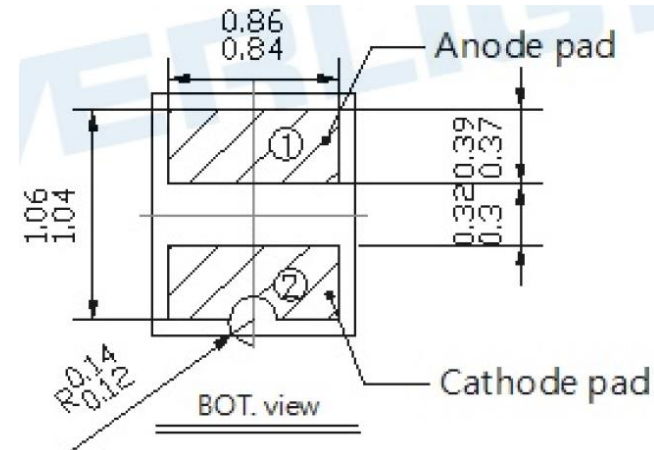
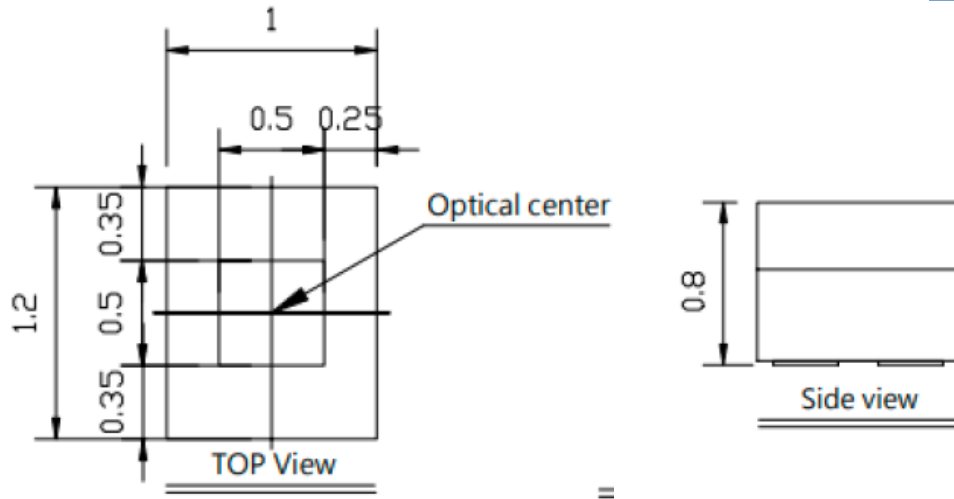
✓ 1.2 x 1.0 x 0.8 (mm)

Key Feature

- ✓ Very small LES(0,55X 0,55, LES 0,3mm²)
- ✓ Max Tj 150°C
- ✓ AEC-Q102 Qualified

Application

- ✓ Ambient Lighting
- ✓ Various Exterior signature/ light function
- ✓ Signal/ Signature lamp for E vehicle



EVERLIGHT Automotive Infrared

October 2022

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IR LED Side View

AEC-Q102 Qualified



➤ **Specification:**

Small double-end package
Peak Wavelength: 940nm
Low forward voltage
Right angle lens

➤ **Package Dimensions (LxWxH) :**
3.0x1.0x2.0mm

Application :
Touch Panel

P/N	IR12-21C/TR8-AM
Dimension (LxWxHmm)	3.0x1.0x2.0
If	65mA
Power	130mW
Intensity @20mA	0.8mW/sr
Peak Wavelength	940nm
Vf	1.2V
View Angle	150°
Operating Temperature	-25°C to +85°C

Photo Diode Side View

AEC-Q102 Qualified



➤ **Specification:**

Fast response time
Peak Wavelength: 940nm
High photo sensitivity
Right angle lens

➤ **Package Dimensions (LxWxH) :**
3.0x1.0x2.0mm

Application :
Touch Panel

P/N	PD12-21C/TR8-AM
Dimension (LxWxH)	3.0x1.0x2.0mm
Photo current @1mW/cm ²	0.8μA
Max. reverse voltage	32V
Dark current @5V	10nA
Peak wavelength	940nm
Wavelength range	610nm ~ 1040nm
Viewing angle	150°
Operating Temperature	-25°C~ +85°C

Photo Diode Top View



➤ **Specification:**
Fast response time
High photo sensitivity

Application :
Touch Panel
Gesture detection
Rain sensor
Dashboard lighting control

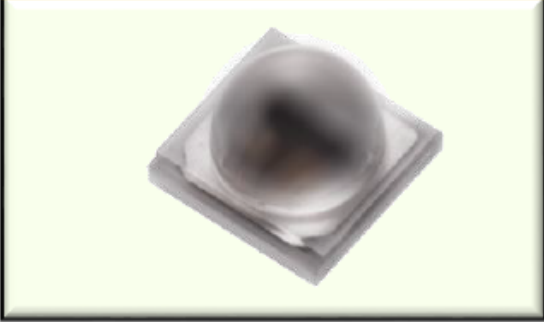
P/N	PD15-22C-AM	PD15-22B-AM
Dimension (LxWxH)	3.2x2.7x1.1mm	3.2x2.7x1.1mm
Photo current	6.5uA	6.5uA
Max. reverse voltage	32V	32V
Dark current (@10V)	10nA	10nA
Peak wavelength	940nm	940nm
Wavelength range	400nm ~ 1100nm	730nm ~ 1100nm
Viewing angle	120°	120°
Operating Temperature	-40°C~+100°C	-40°C~+100°C

AEC-Q101 Qualified

High Power 850 nm

AEC-Q101 Qualified

HIR-C19D Series



- **Specification:**
Small package with high efficiency
Peak Wavelength: 850nm
Thermal resistance: 9K/W
Spherical top view lens
- **Package Dimensions (LxWxH) :**
3.5x3.5x2.36mm

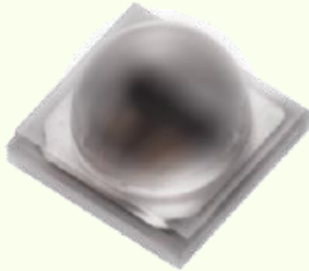
Application :
Driver monitoring
Night vision
Gesture detection

P/N	HIR-C19D-1N50/L649-P03/TR-AM	HIR-C19D-1N90/L649-P03/TR-AM	HIR-C19D-1N150/L649-P03/TR-AM
Dimension (LxWxHmm)	3.5x3.5x3.5	3.5x3.5x2.36	3.5x3.5x1.58
If	1500mA	1500mA	1500mA
Power @1A	1300mW	1300mW	1300mW
Intensity @1A (Typ.)	1130mW/sr	560mW/sr	270mW/sr
Peak Wavelength	850nm	850nm	850nm
Vf @1A	3.5V	3.5V	3.5V
View Angle	50°	90°	150°
Operating Temperature	-40°C~+125°C	-40°C~+125°C	-40°C~+125°C

High Power 940 nm

AEC-Q101 Qualified

IR-C19D Series



➤ Specification:

Small package with high efficiency
Peak Wavelength: 940nm
Thermal resistance: 9K/W
Spherical top view lens

➤ **Package Dimensions (LxWxH) :**
3.5x3.5x2.36mm

Application :

Driver monitoring
Night vision
Gesture detection

P/N	IR-C19D-1N50/L822-P03/TR-AM	IR-C19D-1N90/L822-P03/TR-AM	IR-C19D-1N150/L822-P03/TR-AM
Dimension (LxWxHmm)	3.5x3.5x3.5	3.5x3.5x2.36	3.5x3.5x1.58
If	1000mA	1000mA	1000mA
Power @1A	1400mW	1400mW	1400mW
Intensity @1A (Typ.)	1300mW/sr	640mW/sr	335mW/sr
Peak Wavelength	940nm	940nm	940nm
Vf @1A	3.1V	3.1V	3.1V
View Angle	50°	90°	150°
Operating Temperature	-40°C~+125°C	-40°C~+125°C	-40°C~+125°C

Ambient Light Sensor

AEC-Q100 Qualified



➤ Specification:

Optical response similar to human eyes

High resolution

Programmable integration time

➤ Package Dimensions (LxWxH) :

2.0X2.0X0.63mm

Application :

Night vision

Rain sensor

Dashboard lighting control

P/N	ALS-DPDIC17-78C/L749/TR8-AM
Dimension (LxWxH)	2.0X2.0X0.63mm
Power Supply	2.7V~3.6V
Interface	I2C
Resolution	16bits
View Angle	100°
Detection Range	10mlux ~ 83Klux
Peak wavelength	550nm
Operating Temperature	-40°C~+100°C

VCSEL 940 nm

AEC-Q102 Qualified



- **Specification:**
Small package with high efficiency
Peak Wavelength: 940nm
- **Package Dimensions (LxWxH) :**
3.5x3.5x1.6mm

Application :
Driver monitoring
Flood illumination
Gesture detection

P/N	VS-FI3535-D110-85/L2-W0940/TR8-AM
Dimension (LxWxHmm)	3.5x3.5x1.6mm
If	3A
Power @3A	2W
Spectral Bandwidth	4nm
Wavelength Shift over Temperature	0.07nm/K
Peak Wavelength	940nm
Vf @3A	2V
Total View Angle	110° x 85°
Operating Temperature	-40°C~+105°C



Taiwan, HQ

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