DATASHEET

SMD- Top view LEDs
67-21/YSC-FU1V2B/2T



Features

- P-LCC-2 package.
- Optical indicator.
- Colorless clear resin
- Wide viewing angle 120º.
- High performance.
- Soldering methods: IR reflow soldering.
- Precondition: Bases on JEDEC J-STD 020D Level 3
- Pb-free.
- The product itself will remain within RoHS compliant version.
- Compliance with EU REACH
- Compliance Halogen Free .(Br<900ppm,Cl<900ppm,Br+Cl<1500ppm)

Descriptions

- The 67-21 series is available in soft orange, green,blue and yellow. Due to the package design, the LED has wide viewing angle and optimized light coupling by inter reflector. This feature makes the ideal for light pipe application. The low current requirement makes this device ideal for portable equipment or any other application where power is at a premium.

Applications

- Automotive: backlighting in dashboard and switch.
- Telecommunication: indicator and backlighting in
- telephone and fax.
- Flat backlight for LCD, switch and symbol.
- Light pipe application.
- General use.

Copyright © 2010, Everlight All Rights Reserved. Release Date : 26.Sep.2023. Issue No: DSE-0017579 Rev.V4

Ver.:4 Release Date:10/05/2023 狀態:Approved(正式發行)

Device Selection Guide

Chip Materials	Emitted Color	Resin Color
AlGaInP	Brilliant Yellow	Water Clear

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	50	mA
Peak Forward Current (Duty 1/10 @1KHz)	I_{FP}	100	mA
Power Dissipation	Pd	120	mW
Operating Temperature	T_{opr}	-40 ~ +85	℃
Storage Temperature	Tstg	-40 ~ +90	℃
ESD	ESD_{HBM}	2000	V
Soldering Temperature	T_{sol}	Reflow Soldering : 260 ℃ for 10 sec. Hand Soldering : 350 ℃ for 3 sec.	

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	450	---	1120	mcd	I_F=20mA
Viewing Angle	$2\theta_{1/2}$	---	120	---	deg	I_F=20mA
Peak Wavelength	λp	---	591	---	nm	I_F=20mA
Dominant Wavelength	λd	586	---	594	nm	I_F=20mA
Spectrum Radiation Bandwidth	Δλ	---	20	---	nm	I_F=20mA
Forward Voltage	V_F	1.75	---	2.35	V	I_F=20mA
Reverse Current	I_R	---	---	10	μA	V_R=5V

Notes:
1. Tolerance of Luminous Intensity: ±11%
2. Tolerance of Dominant Wavelength: ±1nm
3. Tolerance of Forward Voltage: ±0.1V

Copyright © 2010, Everlight All Rights Reserved. Release Date : 26.Sep.2023. Issue No: DSE-0017579 Rev.V4
www.everlight.com
Ver.:4 Release Date:10/05/2023 狀態:Approved(正式發行)

Bin Range of Dominant Wavelength

Group	Bin Code	Min.	Max.	Unit	Condition
F	DD1	586	588	nm	I_F=20mA
	DD2	588	590		
	DD3	590	592		
	DD4	592	594		

Bin Range of Luminous Intensity

Bin Code	Min.	Max.	Unit	Condition
U1	450	565	mcd	I_F=20mA
U2	565	715		
V1	715	900		
V2	900	1120		

Bin Range of Forward Voltage

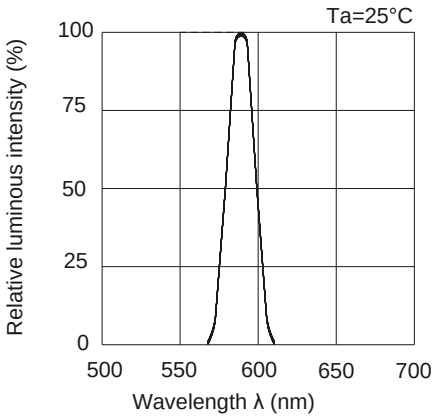
Group	Bin Code	Min.	Max.	Unit	Condition
B	0	1.75	1.95	V	I_F=20mA
	1	1.95	2.15		
	2	2.15	2.35		

Notes:
1. Tolerance of Luminous Intensity: ±11%
2. Tolerance of Dominant Wavelength: ±1nm
3. Tolerance of Forward Voltage: ±0.1V

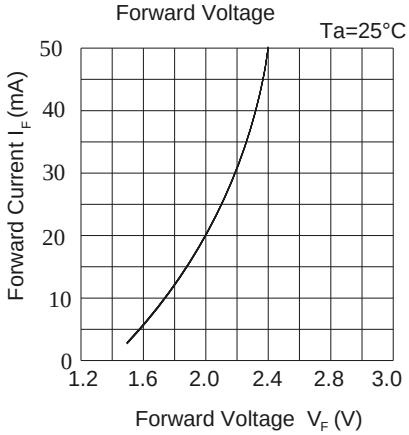
Copyright © 2010, Everlight All Rights Reserved. Release Date : 26.Sep.2023. Issue No: DSE-0017579 Rev.V4
www.everlight.com
Ver.:4 Release Date:10/05/2023 狀態:Approved(正式發行)

Typical Electro-Optical Characteristics Curves

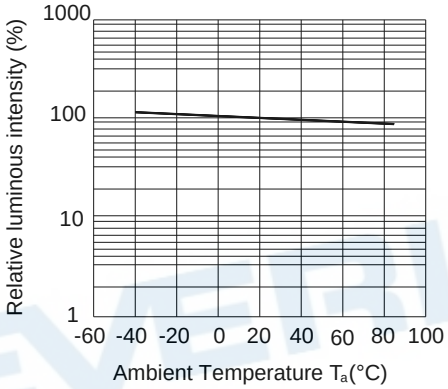
Spectrum Distribution



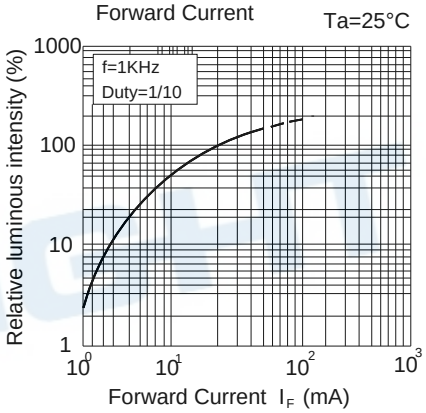
Forward Current vs. Forward Voltage



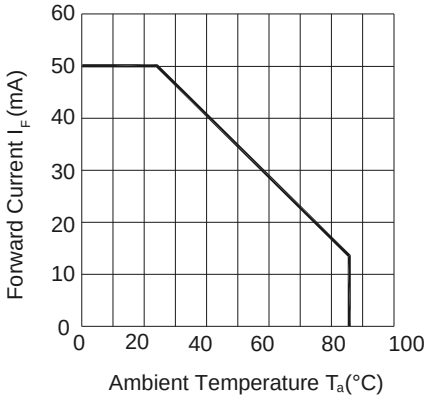
Relative Luminous Intensity vs. Ambient Temperature



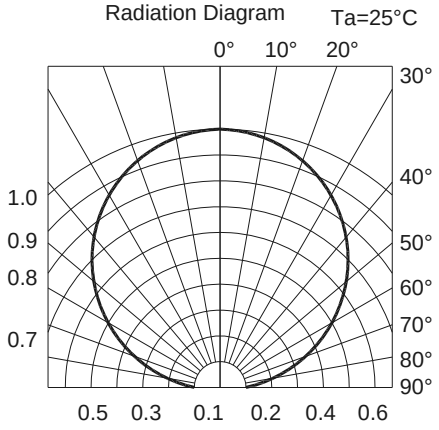
Relative Luminous Intensity vs. Forward Current



Forward Current Derating Curve

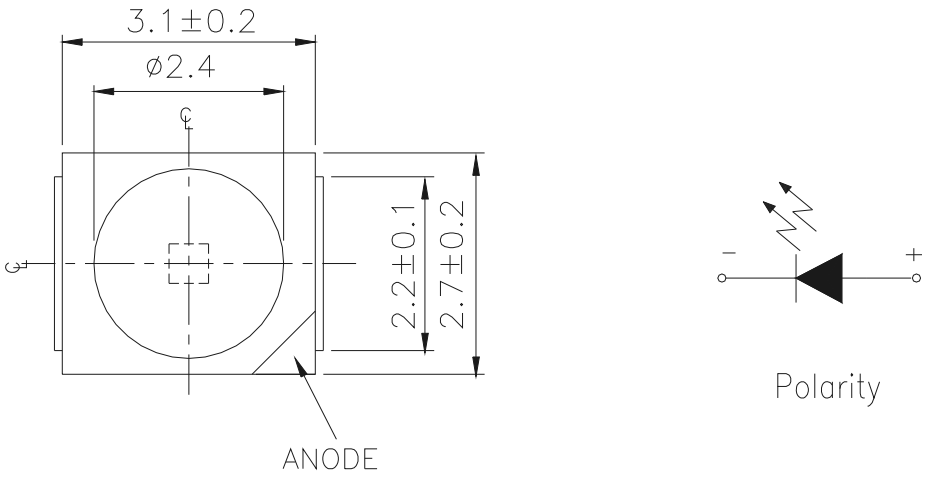


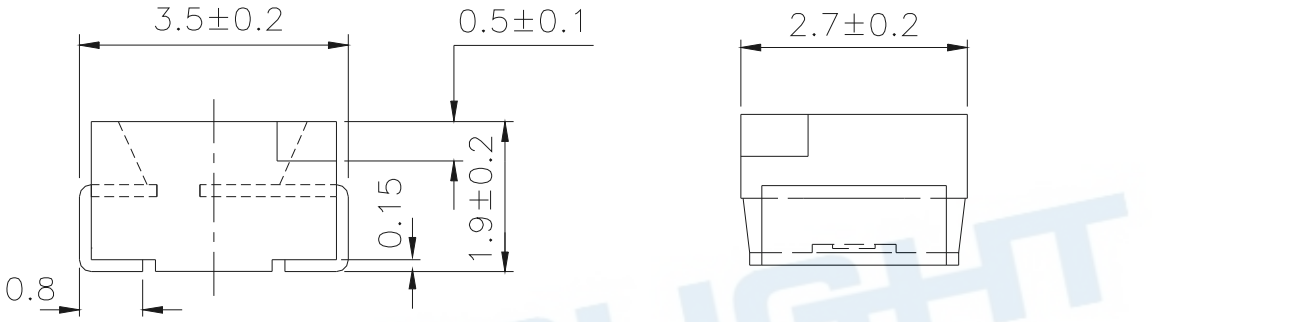
Radiation Diagram



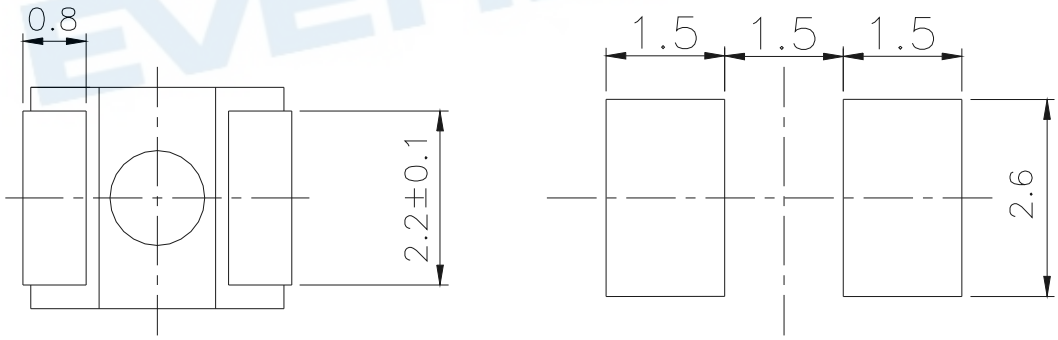
Copyright © 2010, Everlight All Rights Reserved. Release Date : 26.Sep.2023. Issue No: DSE-0017579 Rev.V4
www.everlight.com
Ver.:4 Release Date:10/05/2023 狀態:Approved(正式發行)

Package Dimension





For reflow soldering (Proposal)

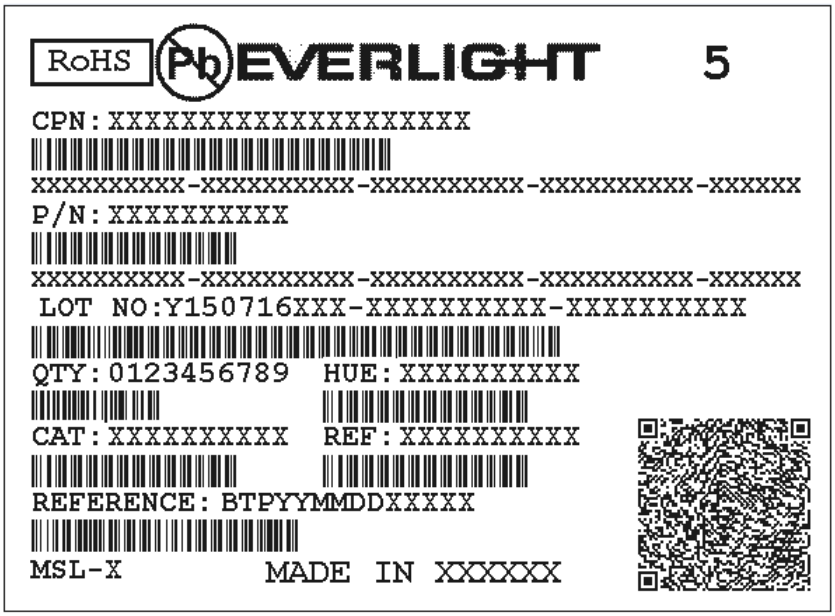


Note: Tolerances unless mentioned ±0.1mm. Unit = mm

Copyright © 2010, Everlight All Rights Reserved. Release Date : 26.Sep.2023. Issue No: DSE-0017579 Rev.V4
www.everlight.com
Ver.:4 Release Date:10/05/2023 狀態:Approved(正式發行)

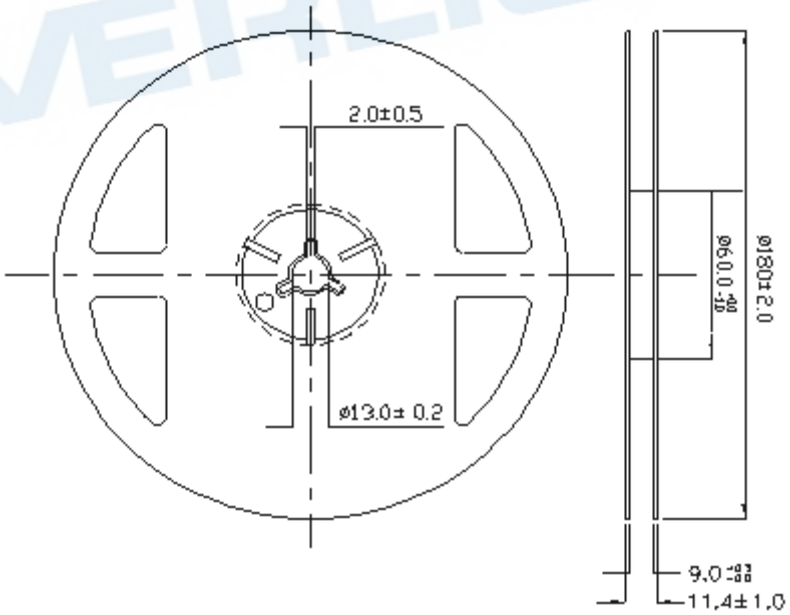
Moisture Resistant Packing Materials

Label Explanation



- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number

Reel Dimensions

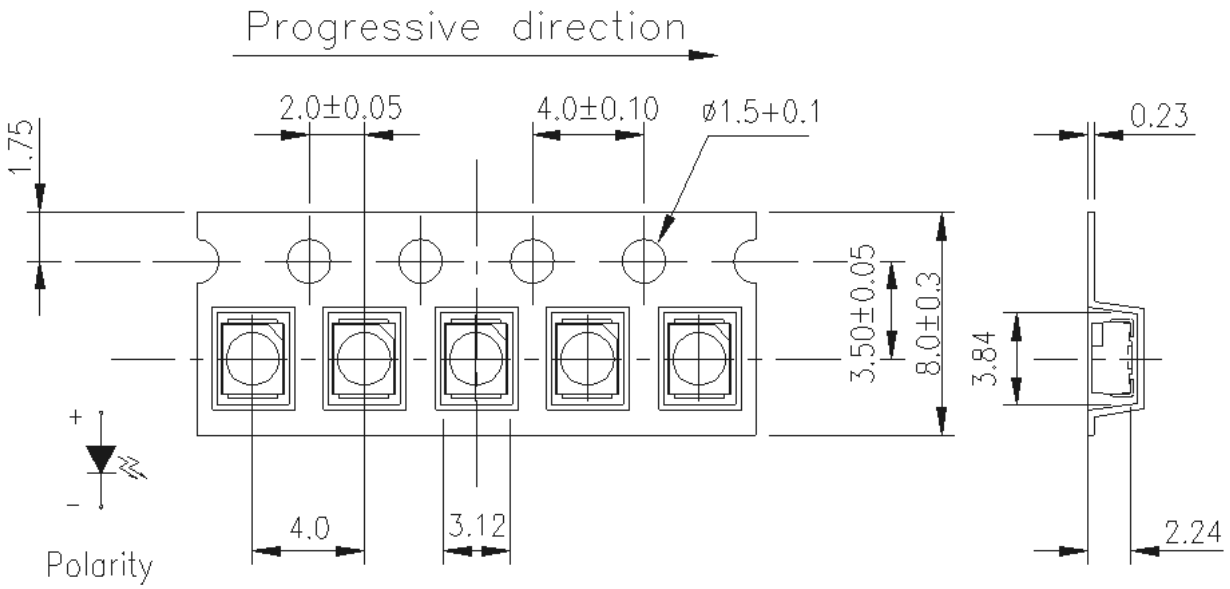


Note: Tolerance unless mentioned is ±0.1mm; Unit = mm

Copyright © 2010, Everlight All Rights Reserved. Release Date : 26.Sep.2023. Issue No: DSE-0017579 Rev.V4

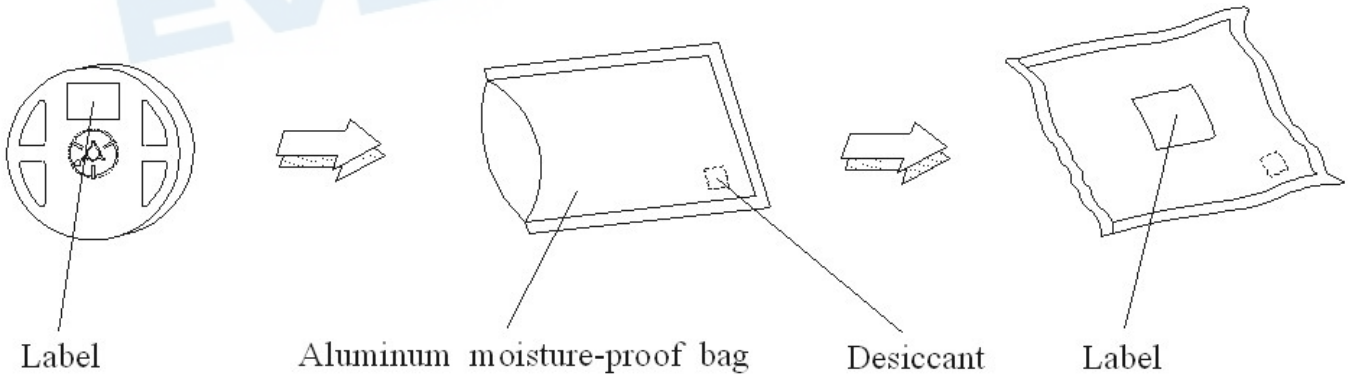
Ver.:4 Release Date:10/05/2023 狀態:Approved(正式發行)

Carrier Tape Dimensions: Loaded Quantity 2000 pcs Per Reel



Note:
Tolerances unless mentioned ±0.1mm. Unit = mm

Moisture Resistant Packing Process

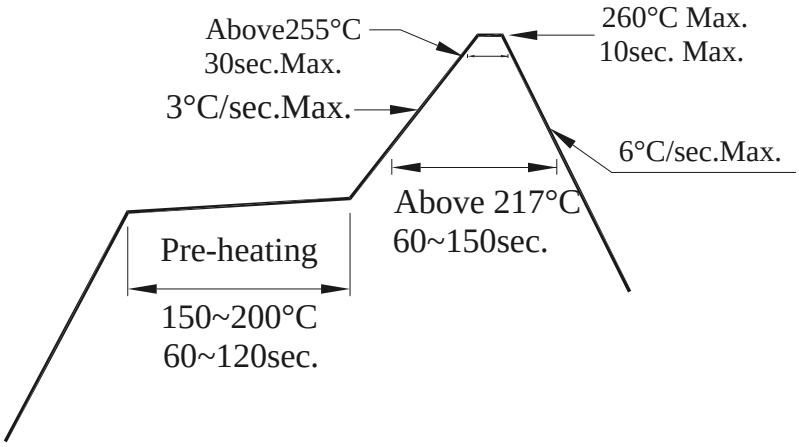


Copyright © 2010, Everlight All Rights Reserved. Release Date : 26.Sep.2023. Issue No: DSE-0017579 Rev.V4

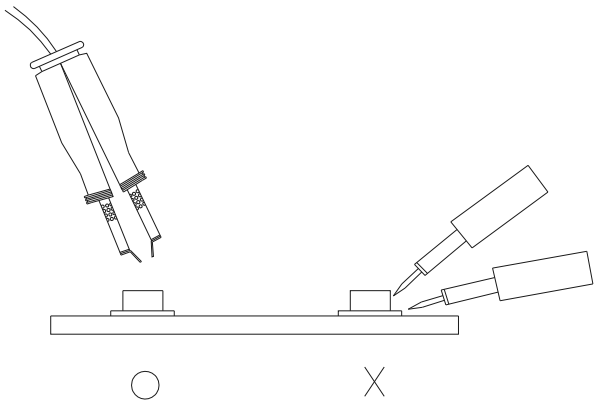
Ver.:4 Release Date:10/05/2023 狀態:Approved(正式發行)

Precautions for Use

1. Over-current-proof
   1.1 Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).



2. Storage
   2.1 Moisture proof bag should only be opened immediately prior to usage.
   2.2 Environment should be less than 30℃ and 60% RH when moisture proof bag is opened.
   2.3 After opening the package MSL Conditions stated on page 1 of this spec should not be exceeded.
   2.4 If the moisture sensitivity card indicates higher than acceptable moisture, the component should be baked at min. 60deg +/-5deg for 24 hours.
3. Soldering Condition
   3.1 Pb-free solder temperature profile
   3.2 Reflow soldering should not be done more than two times.
   3.3 When soldering, do not put stress on the LEDs during heating.
   3.4 After soldering, do not warp the circuit board.
4. Soldering Iron
   Each terminal is to go to the tip of soldering iron temperature less than 350℃ for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.
5. Repairing
   Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.



Copyright © 2010, Everlight All Rights Reserved. Release Date : 26.Sep.2023. Issue No: DSE-0017579 Rev.V4
www.everlight.com
Ver.:4 Release Date:10/05/2023 狀態:Approved(正式發行)

Application Restrictions

High reliability applications such as military/aerospace, automotive safety/security systems, and medical equipment may require different product. If you have any concerns, please contact Everlight before using this product in your application. This specification guarantees the quality and performance of the product as an individual component. Do not use this product beyond the specification described in this document.

DISCLAIMER

1. EVERLIGHT reserves the right(s) on the adjustment of product material mix for the specification.
2. The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
4. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from the use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
5. These specification sheets include materials protected under copyright of EVERLIGHT. Reproduction in any form is prohibited without obtaining EVERLIGHT's prior consent.
6. This product is not intended to be used for military, aircraft, automotive, medical, life sustaining or life saving applications or any other application which can result in human injury or death. Please contact authorized Everlight sales agent for special application request.

Copyright © 2010, Everlight All Rights Reserved. Release Date : 26.Sep.2023. Issue No: DSE-0017579 Rev.V4

Ver.:4 Release Date:10/05/2023 狀態:Approved(正式發行)