



深圳市明辉光电科技有限公司

SPECIFICATION FOR APPROVAL

承认书

Customer 客户	LED Lighting
Type 类别	SMD 贴片
DESCRIPTION 规格	3030 白光
Part No 型号	MH-3030CWDT-06V175
Date 送样日期	
Amount 数量	Copy of Document 承认书份数 2 份

Approved By Customer 客户承认回签	Qualified By 核准	Form Designer 制作
		Ailen

深圳市明辉光电科技有限公司
工厂地址：深圳龙岗区横岗街道办坳二路 30 号 A 栋 5 楼
TEL:86-0755-23337854 Fax: 86-0755-29028130

3.0*3.0 TOP LED**White Light****Ultra Bright LED****Lead (Pb) Free Product - RoHS Compliant****MH-3030CWDT-06V175****Features**

- **package:** white PLCC-2 package, colored diffused resin
- **feature of the device:** extremely wide viewing angle; long life time due to enhanced resin material
- **color coordinates:** x = 0.3006, y = 0.2968 acc. to CIE 1931 (white)
- **typ. color temperature:** 6000K
- **viewing angle:** Lambertian Emitter (120°)
- **technology:** InGaN
- **grouping parameter:** luminous intensity, color coordinates
- **assembly methods:** suitable for all SMT assembly methods
- **soldering methods:** IR reflow soldering and TTW soldering
- **preconditioning:** acc. to JEDEC Level 2
- **taping:** 8 mm tape with 5000/reel, \varnothing 180 mm
- **ESD-withstand voltage:** ESD sensitive device

Applications

- outdoor displays
- backlighting (LCD, switches, keys, displays, illuminated advertising)
- interior and exterior automotive lighting
- substitution of micro incandescent lamps, reading lamps
- emergency lighting
- signal and symbol luminaire
- marker lights (e.g. steps, exit ways, etc.)

**Ordering Information**

Type	Color of Emission	Luminous Intensity ($I_F = 175mA$)	
		Min I_V (LM)	Typ I_V (LM)
MH-3030CWDT-06V175	White	145	180

Maximum Ratings

Parameter	Symbol	Values	Unit
Operating temperature range	T_{op}	- 40 ... + 95	°C
Storage temperature range	T_{stg}	- 40 ... + 100	°C
Junction temperature	T_j	120	°C
Forward current ($T_A = 25^\circ C$)	I_F	175	mA
Surge current $t \leq 10 \mu s, D = 0.005, T_A = 25^\circ C$	I_F	250	mA

Reverse voltage ($I_R = 10\mu A, T_A = 25^\circ C$)	V_R	8	V
Thermal resistance solder point	R_{th-js}	19	$^\circ C / W$
Junction Temperature	T_j	120	$^\circ C$

Characteristics($T_A = 25^\circ C$)

Parameter	Symbol	Values	Unit
Chromaticity coordinate x ($I_F = 175mA$)	x	0.3145	-
Chromaticity coordinate y ($I_F = 175mA$)	y	0.3319	-
Viewing angle at 50 % Φ_V (typ.)	2φ	120	deg.
Forward voltage ($I_F = 175mA$)	(min.)	V_F	5.7
	(typ.)	V_F	5.9
	(max.)	V_F	6.2
Reverse current ($V_R = 5V$)	(max.)	I_R	5
			μA

Brightness Groups($I_F = 175mA$)

Brightness Groups	MIN	MAX
B2	145	155
C3	155	175

Chromaticity Coordinate Groups($I_F = 175mA$)

Group	x1	y1	x2	y2	x3	y3	x4	y4
E1	0.3006	0.2968	0.3049	0.3046	0.2994	0.3142	0.2949	0.3057
E2	0.3049	0.3046	0.3091	0.3123	0.304	0.3226	0.2994	0.3142
YA1	0.3091	0.3123	0.3134	0.3201	0.3085	0.3311	0.304	0.3226
YA2	0.3134	0.3201	0.3177	0.3279	0.313	0.3395	0.3085	0.3311
M1	0.3177	0.3279	0.3219	0.3356	0.3175	0.348	0.313	0.3395
M2	0.3219	0.3356	0.3262	0.3434	0.3221	0.3564	0.3175	0.348
M3	0.3262	0.3434	0.3304	0.3511	0.3266	0.3649	0.3221	0.3564
M4	0.3304	0.3511	0.3347	0.3589	0.3311	0.3733	0.3266	0.3649

Group Name on Label

Example: B2- M1

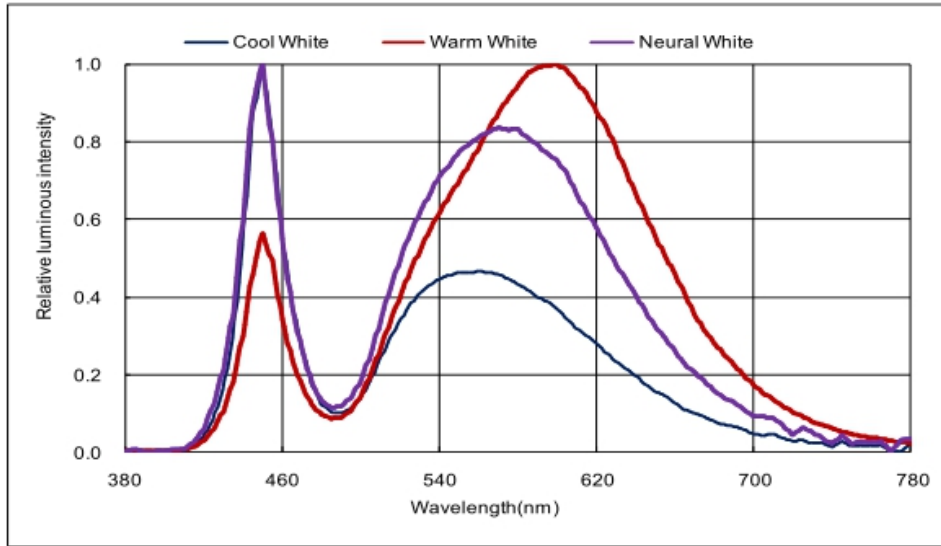
Brightness Group	$Cie(x,y)$
B2	M1

Note: No packing unit/tape ever contains more than one group for each selection.

Relative Spectral Emission

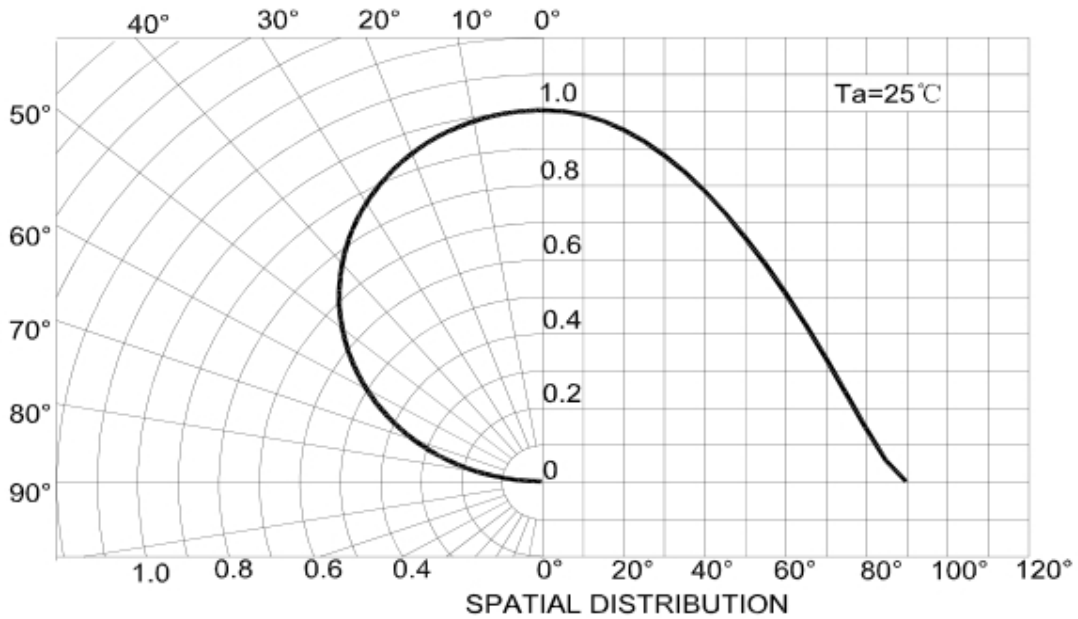
$V(\lambda)$ = Standard eye response curve

$\Phi_{rel} = f(\lambda)$; $T_A = 25\text{ }^\circ\text{C}$; $I_F = 175\text{mA}$



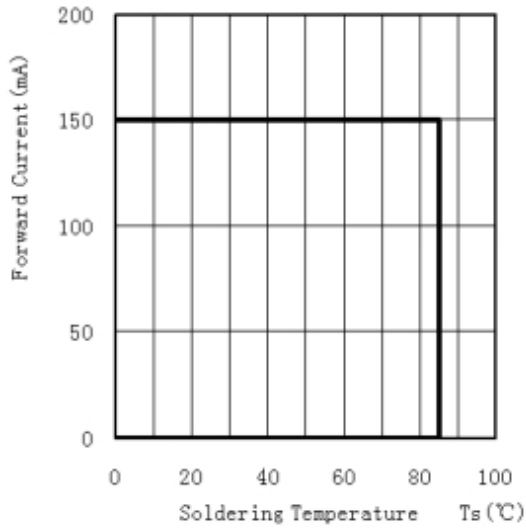
Radiation Characteristic

$\Phi_{rel} = f(\varphi)$; $T_A = 25\text{ }^\circ\text{C}$



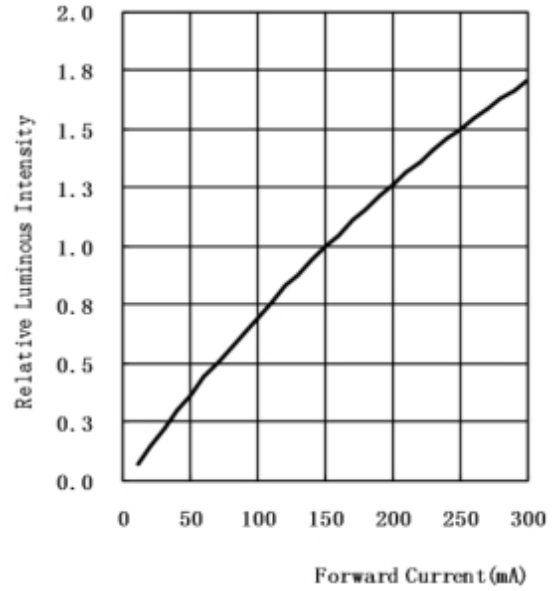
Forward Current

$I_F = f(V_F); T_A = 25\text{ }^\circ\text{C}$



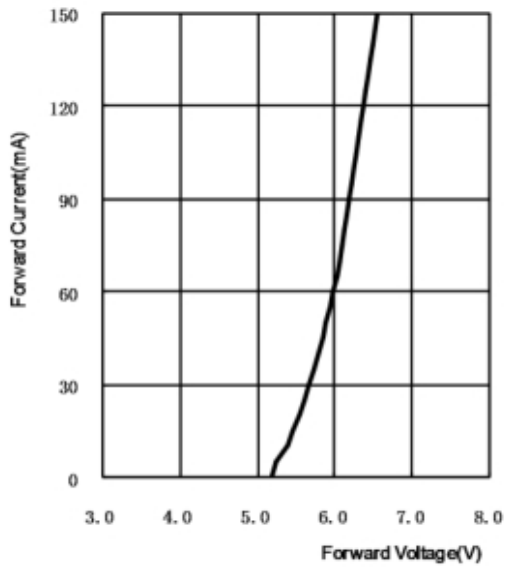
Relative Luminous Intensity

$I_v/I_v(175\text{mA}) = f(I_F); T_A = 25\text{ }^\circ\text{C}$



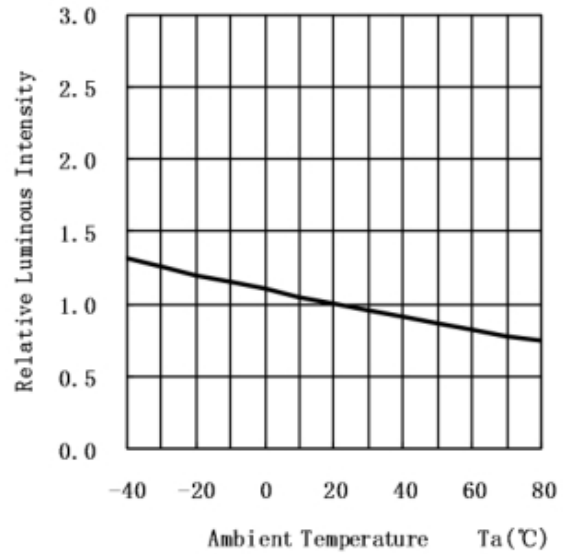
Chromaticity Coordinate Shift

$x, y = f(I_F); T_A = 25\text{ }^\circ\text{C}$

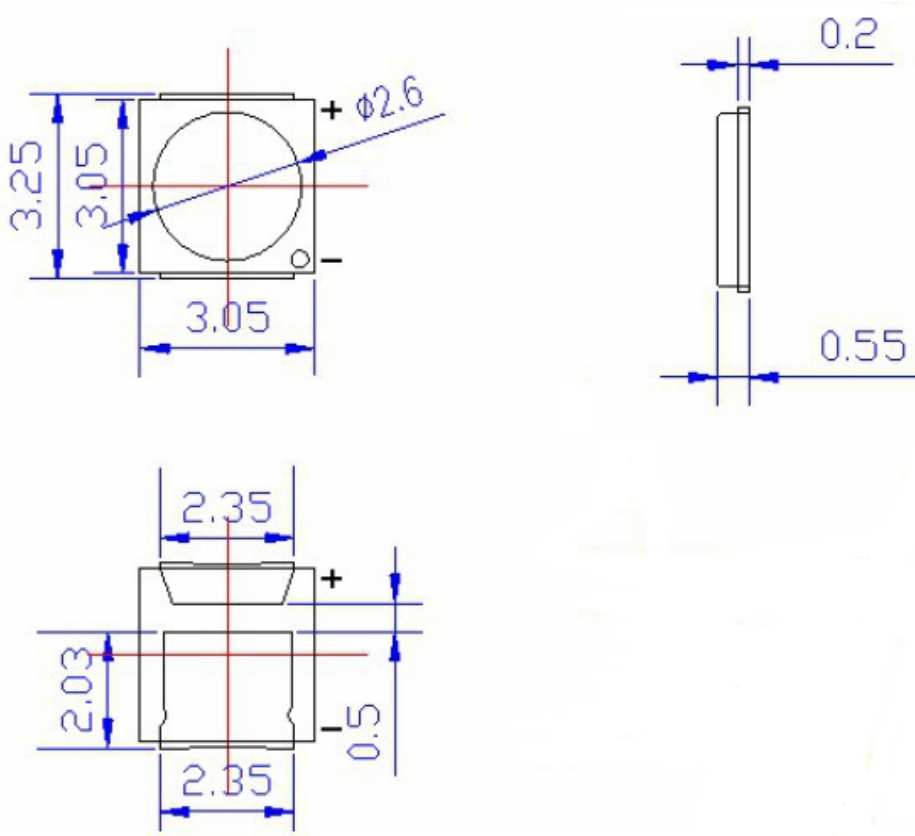


Max. Permissible Forward Current

$I_F = f(T)$

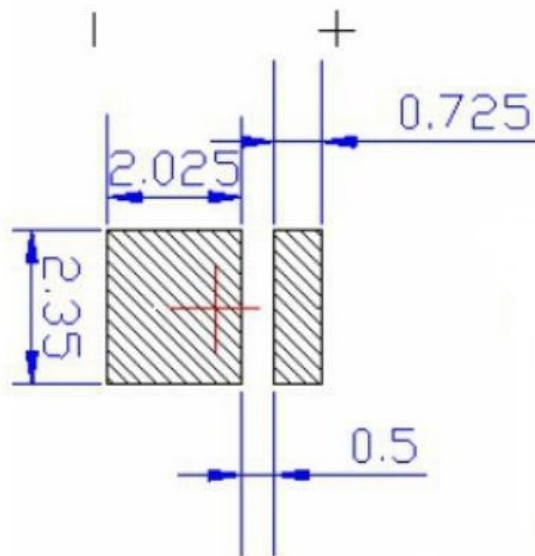


Package Outlines ($\pm 0.1\text{mm}$)



Recommended Solder Pad

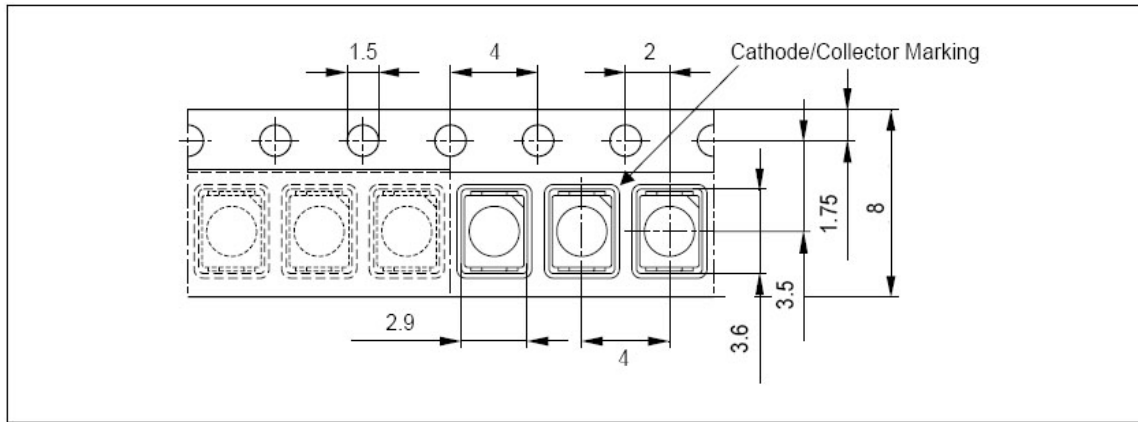
IR Reflow Soldering



UNIT:mm

Method of Taping / Polarity and Orientation

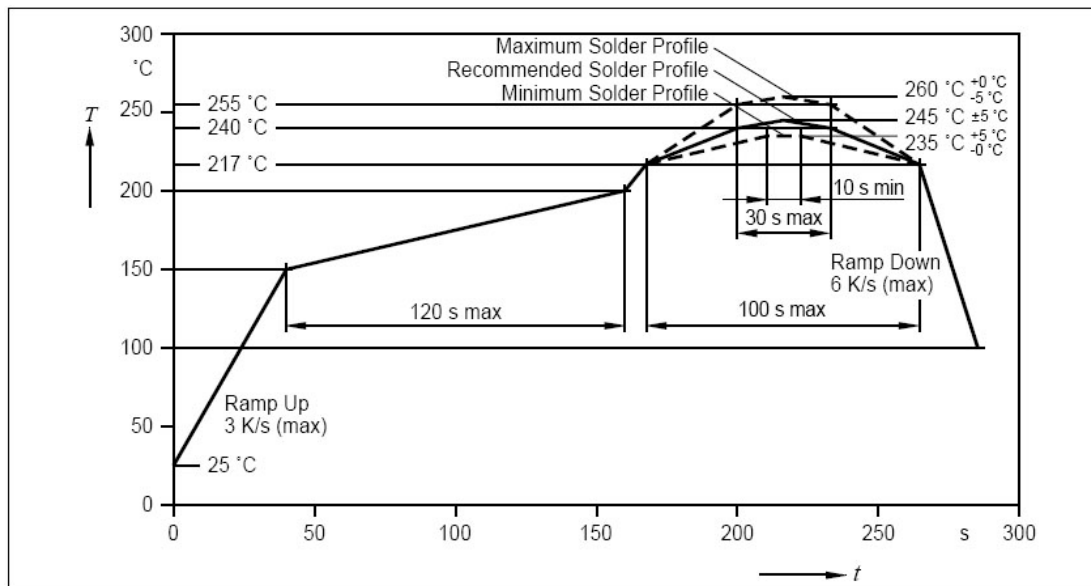
Packing unit 5000/reel, ϕ 180 mm



Soldering Conditions

Preconditioning acc. to JEDEC Level 2

IR Reflow Soldering Profile for lead free soldering (acc. to J-STD-020B)



Caution

- Recommended storage condition: At 20°C~30°C and relative humidity 70% RH max.
- After this bag is opened, devices that will be applied to infrared reflow, vapor-phase reflow, or equivalent soldering process must be:
 - Completed within 24hours.
 - Stored at less than 30% RH.
- Devices require baking before mounting, if: 2a or 2b is not met.
- If baking is required, devices must be baked under blow conditions: 12hours at 75°C \pm 3°C.
- [Over-current-proof] Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change(Burn out will happen)
 [过电流保护] 客户必须使用电阻器进行保护; 否则轻微的电压变化将导致大电流变化(将发生烧坏.)