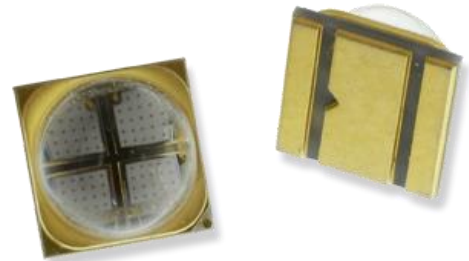




## GD65X-365M-DL

- UVA High Power LED
- 365 nm, 2500 mW
- 6565 SMD Package
- Quartz Glass Lens
- Viewing Angle 60°



### Description

**GD65X-365M-DL** is an **ultraviolet** multi emitter (**4 chips**) light emission source, typically emitting at **365 nm (UVA)** with an optical output power of typically **2500 mW**. The hermetically sealed ceramic SMD package features a **quartz glass lens**. **Printed circuit boards (PCB)** are available for evaluation and prototyping (see page 3)

### Absolute Maximum Ratings

Parameter	Symbol	Value		Unit
		min.	max.	
Reverse Current ( $V_R=10V$ )	$I_R$		10	$\mu A$
Forward Current	$I_F$		2000	mA
Forward Pulse Current*	$I_{FP}$		3000	mA
Power Dissipation	$P_D$		15	W
Operating Temperature	$T_{OPR}$	- 40	+ 85	$^{\circ}C$
Storage Temperature	$T_{STG}$	- 40	+ 100	$^{\circ}C$
Soldering Temperature (max.10 s)	$T_{SOL}$		240	$^{\circ}C$
Junction Temperature	$T_J$		120	$^{\circ}C$

\*duty cycle 10%, pulse length 100  $\mu s$



### Electro-Optical Characteristics ( $T_{CASE} = 25^{\circ}C$ )

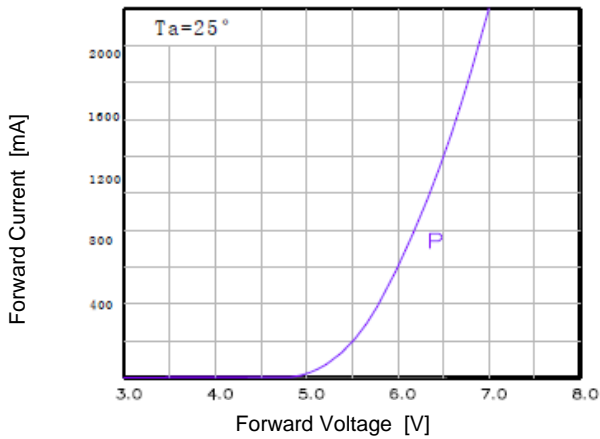
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Peak Wavelength	$\lambda_P$		365		nm
Output Power	$P_O$		2500		mW
Forward Voltage	$V_F$	6.0		8.0	V
Forward Current	$I_F$		1400		mA
Beam Angle	$2\theta_{1/2}$		60		deg.
Thermal Resistance	$R_{th}$		6.5		$^{\circ}C/W$

Forward voltage measurement tolerance  $\pm 0.1$  V  
Output power measurement tolerance  $\pm 10$  %  
Peak wavelength measurement tolerance  $\pm 1$  %

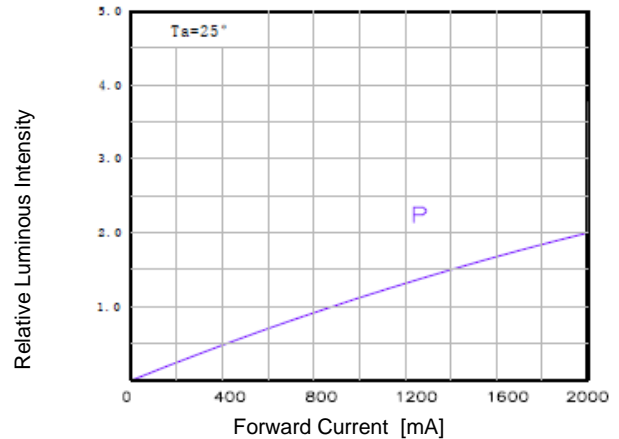


## Performance Characteristics (T<sub>CASE</sub> = 25°C)

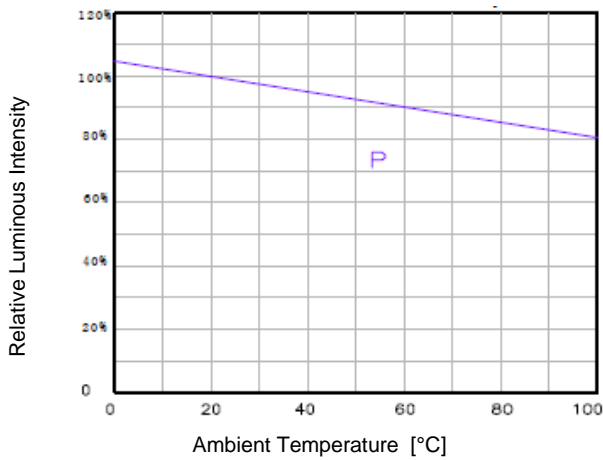
### Forward Current vs. Forward Voltage



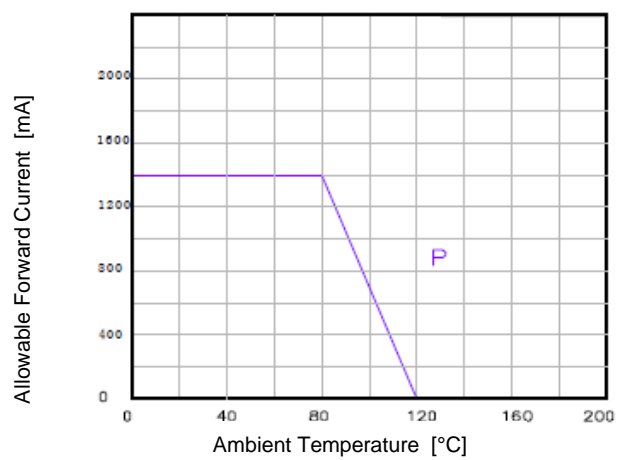
### Relative Luminous Int. vs Forward Current



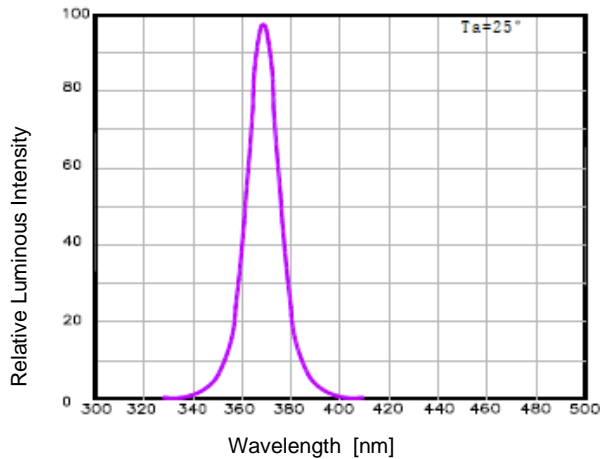
### Relative Luminous Int. vs Ambient Temp.



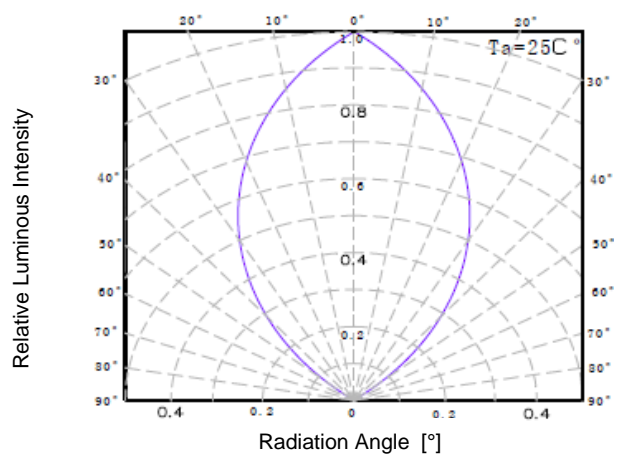
### Allowable Forward Current vs. Temp.



### Relative Luminous Int. vs Wavelength



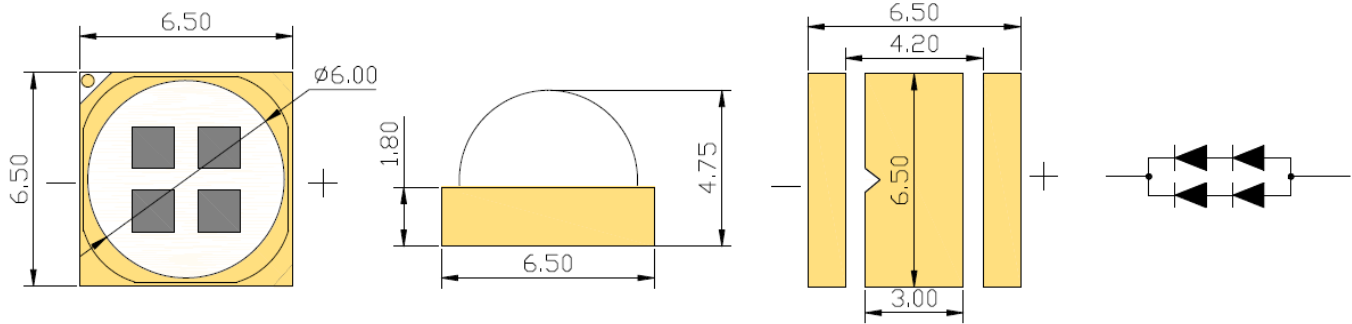
### Radiation Characteristics





## Outline Dimensions

### SMD 6565



All dimensions in mm, tolerance  $\pm 0.1$  mm

## Accessories

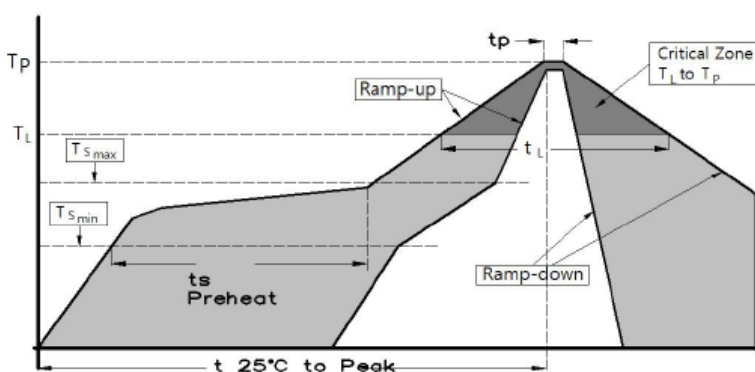
### GD65-PCB-20

Printed **copper circuit board**, designed for easily soldering and mounting of GD65 series LEDs. Ideally suited for prototyping and evaluation. 20 mm diameter

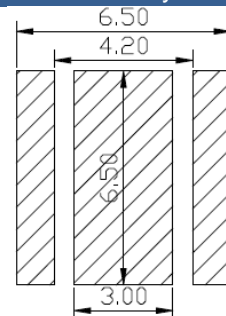


## Reflow Soldering Information

### JEDEC-J-STD-020C Profile



### Solder Pad Layout



- all dimensions in mm
- drawing not to scale

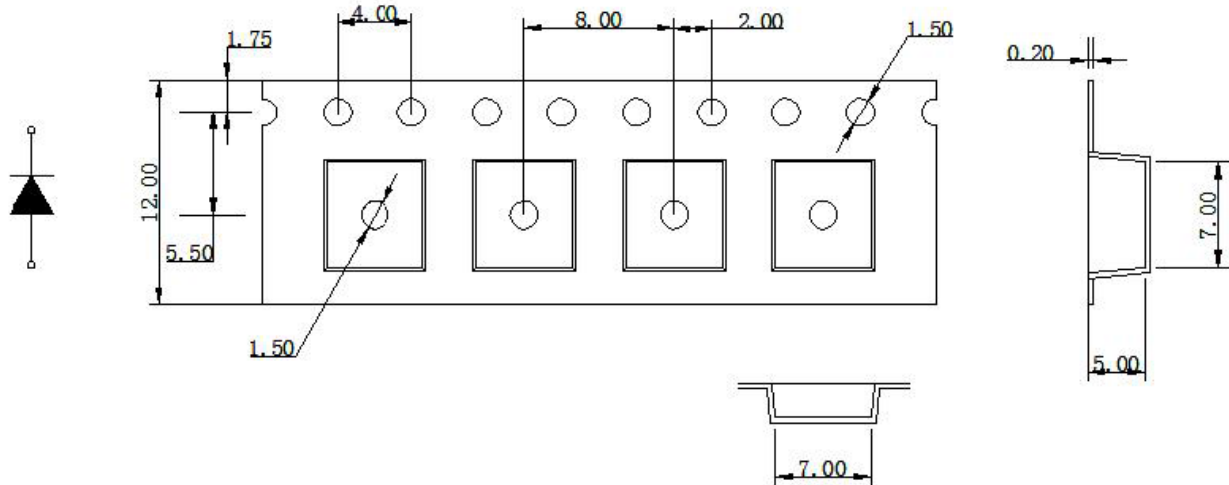
Heating Rate ( $T_{S_{MAX}} - T_P$ )	$\leq 3$ °C/s
Minimum Preheat Temp. ( $T_{S_{MIN}}$ )	130 °C
Maximum Preheat Temp. ( $T_{S_{MAX}}$ )	180 °C
Preheat Time ( $t_s$ )	60 – 120 s
Critical Temp ( $T_L$ )	200 °C
Time within Critical ( $t_L$ )	$\leq 60$ s
Soldering Temperature ( $T_P$ )	$\leq 240$ °C
Soldering Time ( $t_p$ )	$\leq 10$ s
Time within 5 °C of max. Soldering Temp.	$\leq 30$ s
Cool Down Rate	$\leq 6$ °C/s
Time to $T_P$ (from 25 °C)	< 8 min.



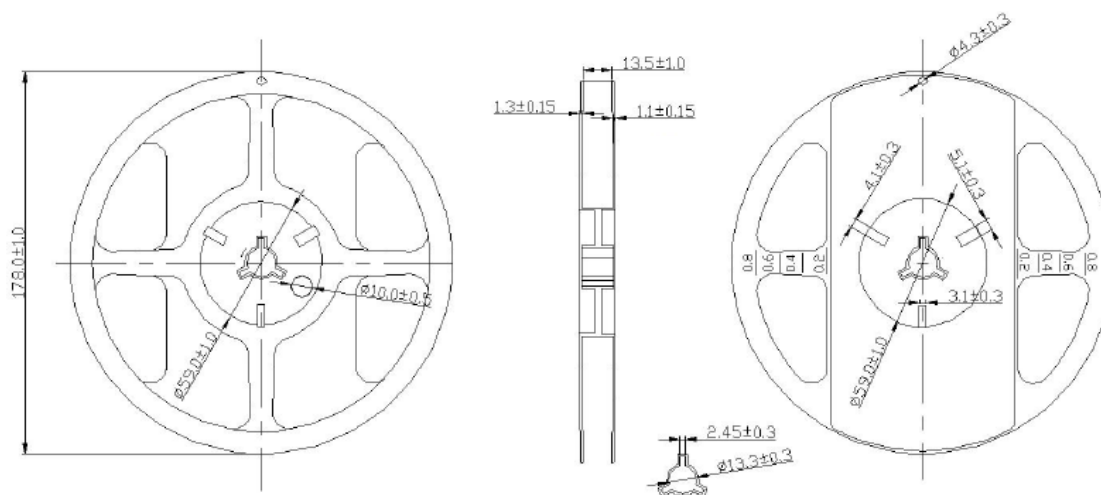
- Reflow soldering should not be done more than two times
- LED must not be cooled rapidly after soldering
- When hand soldering, soldering iron temperature must be below 260 °C
- When hand soldering, soldering must be completed within 3

## Packaging Information

### Tape specification (mm)



### Reel specification (mm)



- Standard packaging quantity 500-1000 pcs/reel