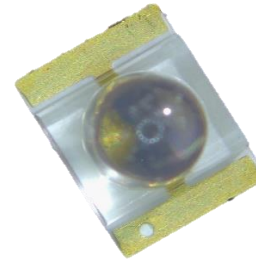


**Features:**

- \* Standard design LED for general purpose
- \* Water-clear package style
- \* RoHs and REACH conform

**Applications**

- \* IR-Flash-Light
- \* Medical Instruments
- \* Light Interrupter and switches
- \* Oper-Air communication / IrDa

**Optical and Electrical Characteristics @Tambient =25°C**

Symbol	Parameter	Min	Typ	Max	Unit	Test conditions
$I_F$	DC Forward current			350	mA	Ta = 25°C
$V_F$	Forward Voltage		1.35	1.7	V	IF = 20mA
$I_R$	Reverse Current			2	μA	Vrev = 5V
$\lambda_{Peak}$	Peak Wavelength	860		870	nm	IF = 20mA
$\Delta\lambda_{0.5}$	Bandwidth of half power		30	35	nm	IF = 20mA
$t_f$	Fall time			3	μs	
$t_r$	Rise time			8	μs	
$\Phi_E$	Total Radiant Flux	49	51		mW	IF = 100mA
$I_e$	Radiant Intensity	45		60	mW/sr	IF = 100mA
A	Active Array		0.98		mm <sup>2</sup>	
$2\Phi_{0.5}$	Full Emission Angle		20		deg.	
TK <sub>VF</sub>	Temp.Coeff. Of Forward Voltage		-1.6		mV/K	
TK <sub>F</sub>	Temp. Coeff. Of Radiant Power		-0.4		%/K	
T <sub>Operating</sub>	Operating Temperature	-40		85	°C	
T <sub>Storage</sub>	Storage Temperature	-40		85	°C	
T <sub>Soldering</sub>	Soldering Temperature			245	°C	Reflow
Q <sub>J-PIN</sub>	Thermal Resistance		450		K/W	
P <sub>tot</sub>	Total Power Dissipation @ 20mA			595	mW	

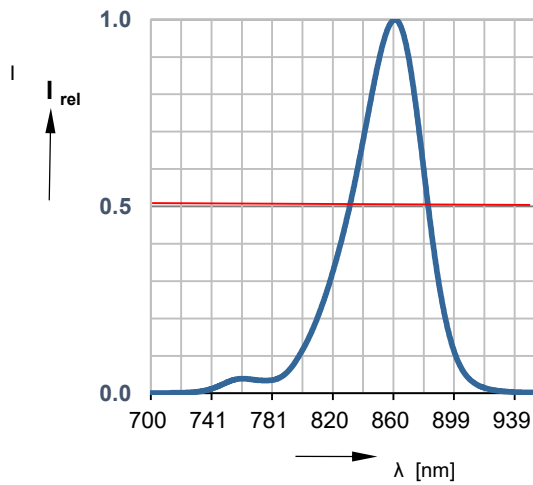
\* values only for information

**Pls. Contact us for more technical detail information !**

CREATIVE LED GMBH reserves the right to make changes at any time in order to improve design and to supply the best product possible, contact us for latest device specification sheets before using.

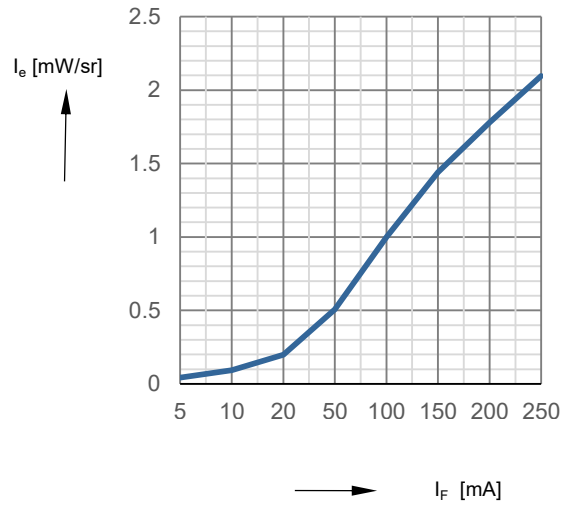
### Relative Spectral Emission

@20mA @ T<sub>ambient</sub> = 25°C



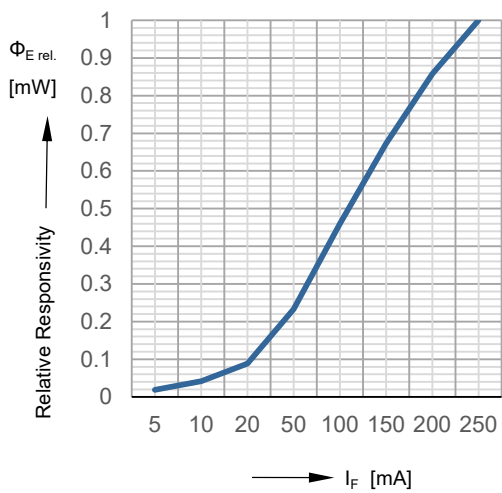
### Radiant Intensity

@ T<sub>ambient</sub> = 25°C



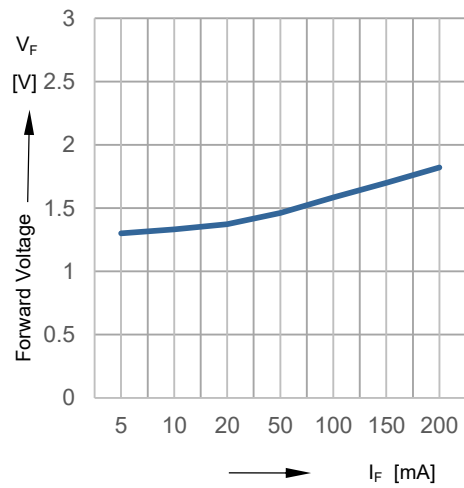
### Relative Radiant Flux

@ T<sub>ambient</sub> = 25°C



### Forward Voltage

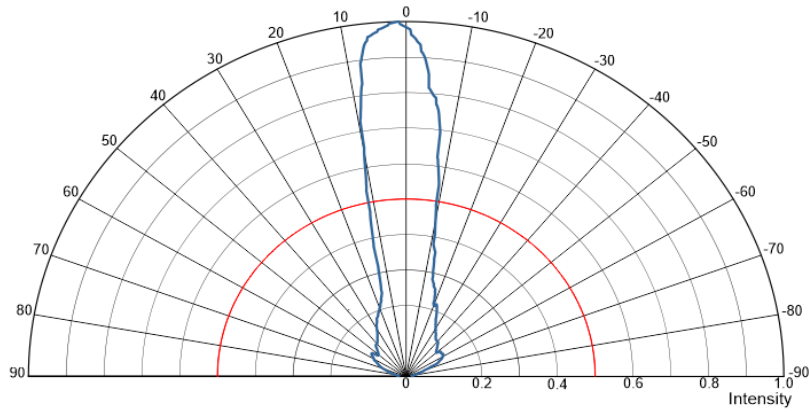
@ T<sub>ambient</sub> = 25°C



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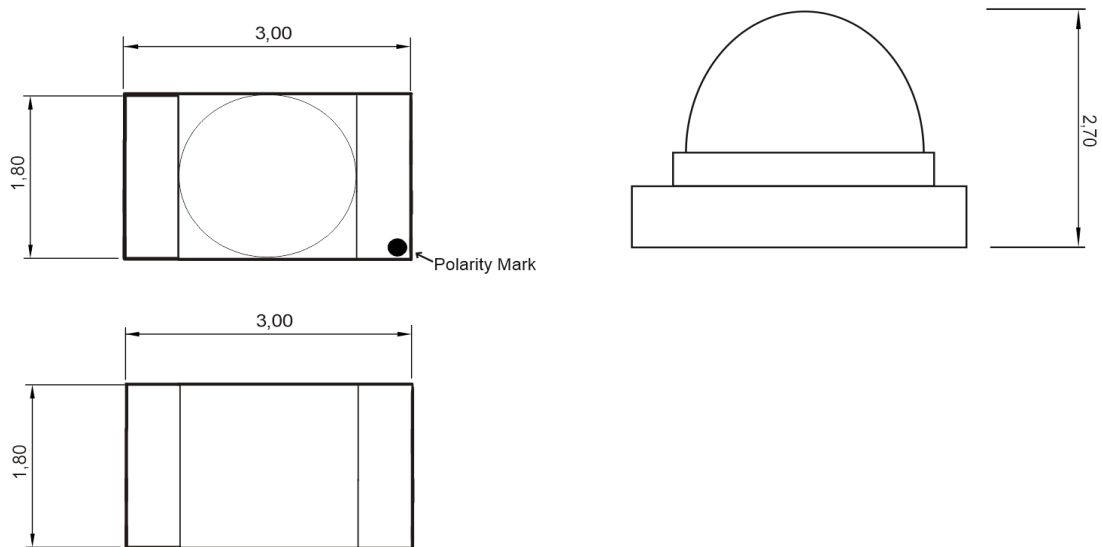
### Relative Radiation Angle:

@20mA @ T<sub>ambient</sub> = 25°C



**Order informations:** CQM55593TDQB Taped in Reel (1500pcs/reel)

### Mechanical Drawing:

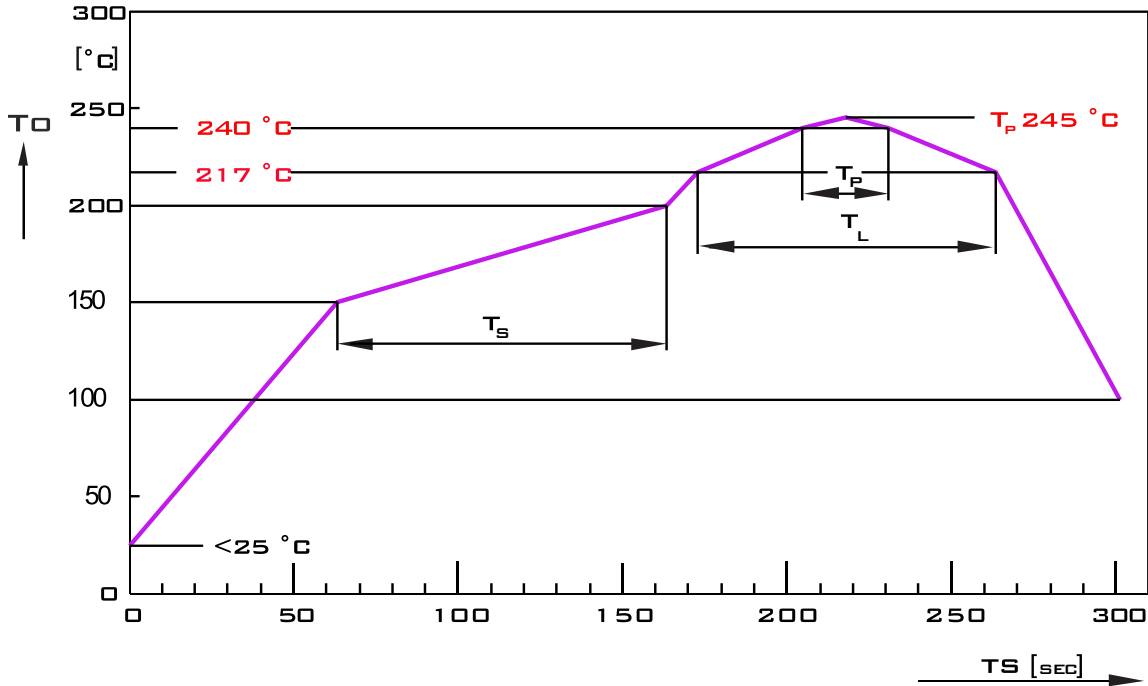


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## Reflow Soldering Profile:

### REFLOW SOLDERING PROFILE

PRECONDITIONING: JEDEC LEVEL 3 ACC. TO JEDEC J-STD-020D.01



PROFIL FEATURES	SYMBOL	PB-FREE (SNAGCU) ASSEMBLY			UNIT
		MINIMUM	RECOMMENDATION	MAXIMUM	
RAMP-UP RATE TO PREHEAT <sup>(1)</sup> 25 °C TO 150 °C			2	3	K/SEC
TIME $T_S$ $T_{S\text{MIN}}$ TO $T_{S\text{MAX}}$	$T_S$	60	100	120	SEC
RAMP-UP RATE TO PEAK <sup>(1)</sup> $T_{S\text{MAX}}$ TO $T_P$			2	3	K/SEC
LIQUIDUS TEMPERATURE	$T_L$		217		°C
TIME ABOVE LIQUIDUS TEMPERATURE	$T_L$		80	100	SEC
PEAK TEMPERATURE	$T_P$		240	245/260 <sup>(2)</sup>	°C
TIME WITHIN 5 °C OF THE SPECIFIED PEAKTEMPERATURE	$T_{P-5K}$	10	20	30	SEC
RAMP DOWN RATE $T_P$ TO 100 °C			3	6	K/SEC
TIME 25 °C TO $T_P$			300	480 <sup>(2)</sup>	SEC

ALL TEMPERATURES REFERS TO THE CENTER OF THE PACKAGES, MEASURED ON THE TOP OF COMPONENT

(1) SLOPE CALCULATION DT/DT: DT MAX.5 SEC. ; FULFILLMENT FOR THE WHOLE T-RANGE

(2) THESE MAXIMUM VALUES ARE STRONG DEPEND ON THE REFLOW-SOLDERING EQUIPMENT AND APPLICATION