

CQM55593TDQB

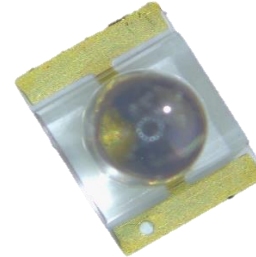
870nm

**IR LED
Edged Center Bonded**

creativeled.com

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			100	mA	Ta = 25°C
I_{Peak}	Peak Forward current			200	mA	Tp < 10µsec. ; T=1:100 ; Rtherm < 100K/W
V_F	Forward Voltage		1.35	1.7	V	IF = 20mA
λ_{Peak}	Peak Wavelength		860	875	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	
Φ_E	Total Radiant Flux	49	51		mW	IF = 100mA
I_e	Radiant Intensity	45		60	mW/sr	IF = 100mA
A	Active Array		0.098		mm²	
$2\Phi_{0.5}$	Full Emission Angle		20		deg.	
TK _{VF}	Temp.Coeff. Of Forward Voltage		-2		mV/K	
TK _F	Temp. Coeff. Of Radiant Power		-0.4		%/K	
T _{Operating}	Operating Temperature	-40		85	°C	
T _{Storage}	Storage Temperature	-40		85	°C	
T _{Soldering}	Soldering Temperature			240	°C	Reflow
Q _{j-PIN}	Thermal Resistance		450		K/W	
P _{tot}	Total Power Dissipation @ 20mA			170	mW	

* values only for information

Order informations:

CQM55593TDQB

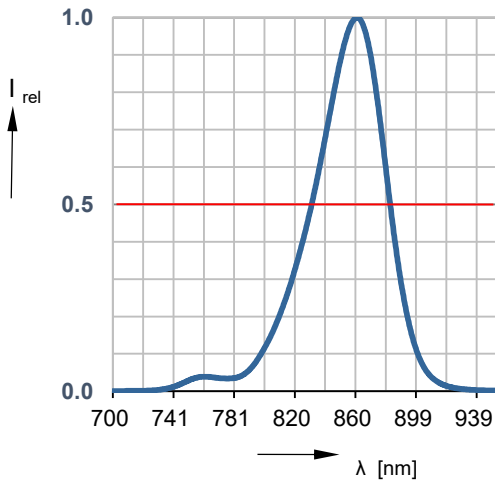
Tape & Reel (1500pcs/reel)

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.

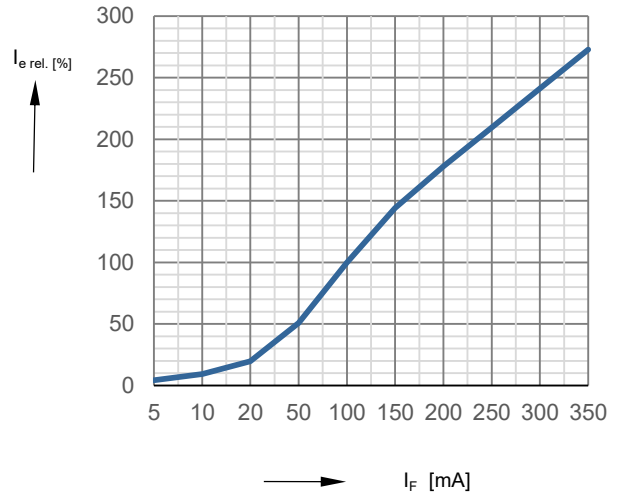
Relative Spectral Emission

@20mA @ T_{ambient} = 25°C



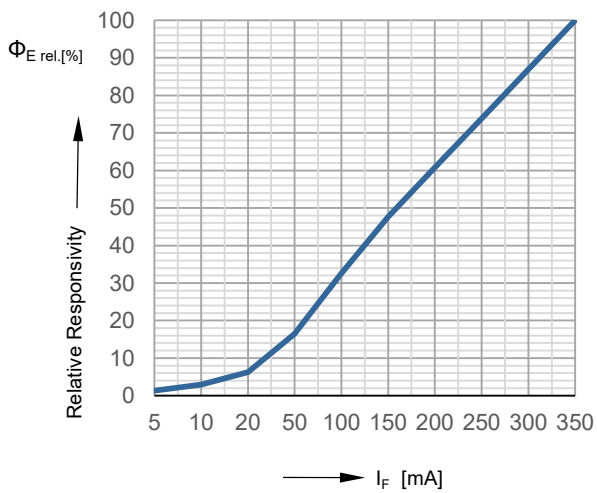
Relative Radiant Intensity

@ T_{ambient} = 25°C



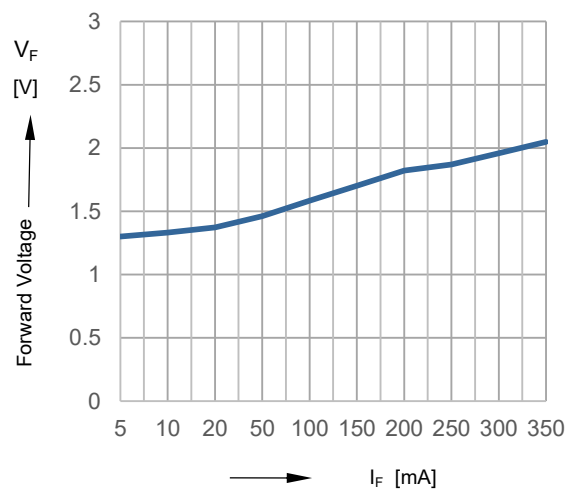
Relative Radiant Flux

@ T_{ambient} = 25°C



Forward Voltage

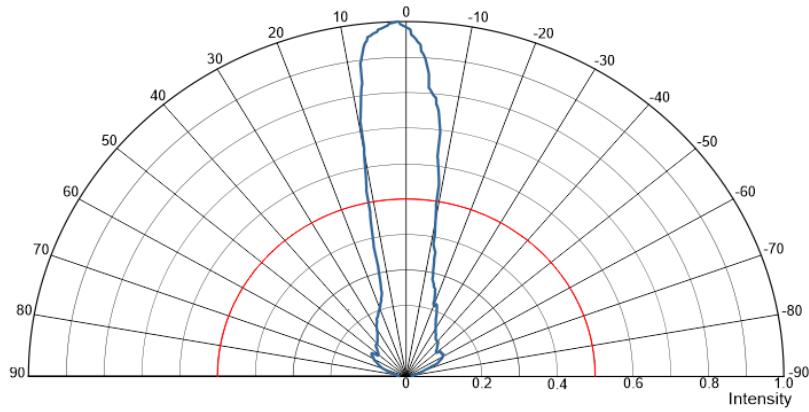
@ T_{ambient} = 25°C



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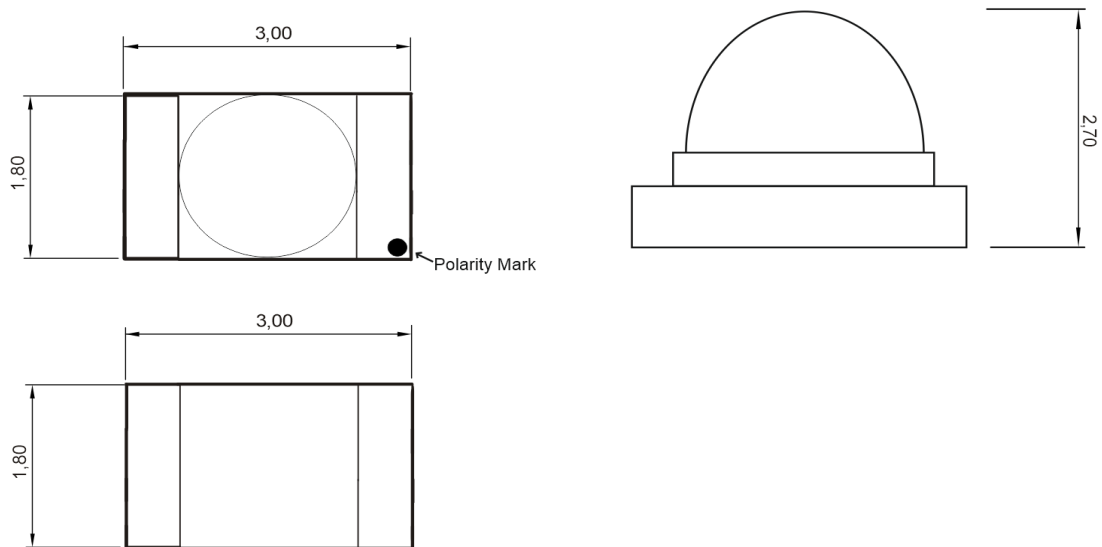
Relative Radiation Angle:

@20mA @ T_{ambient} = 25°C



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

Mechanical Drawing:

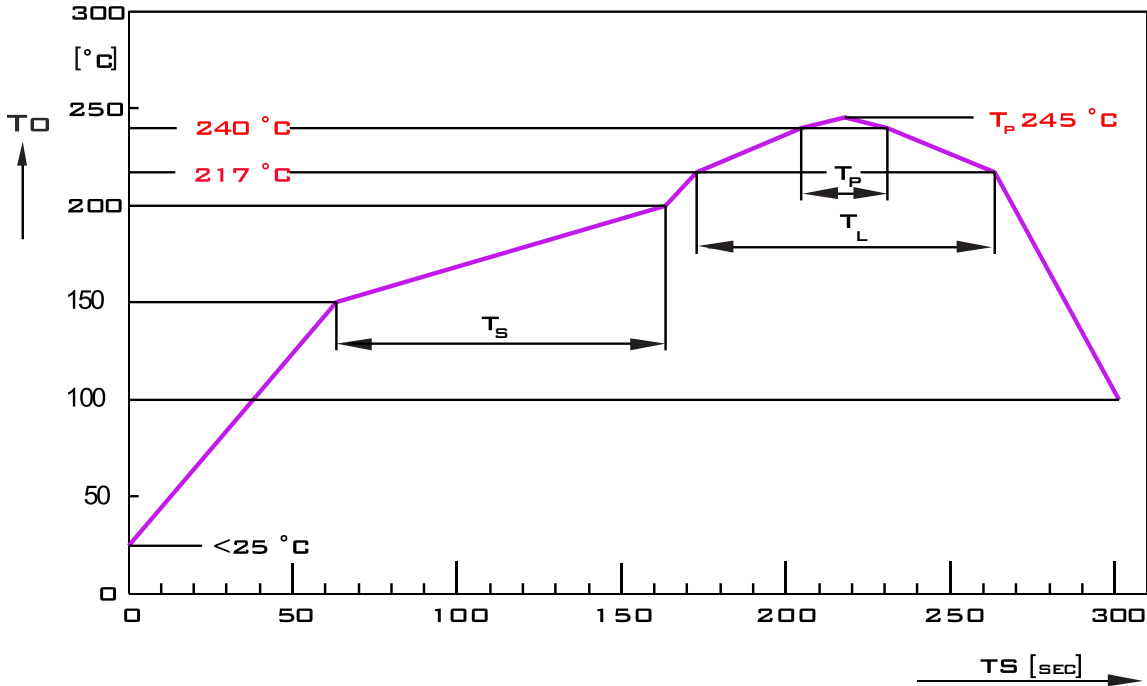


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Reflow Soldering Profile:

REFLOW SOLDERING PROFILE

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



PROFIL FEATURES	PB-FREE (SNAGCU) ASSEMBLY			UNIT	
	SYMBOL	MINIMUM	RECOMMENDATION		MAXIMUM
RAMP-UP RATE TO PREHEAT ⁽¹⁾ 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 ⁽¹⁾ $T_{S\text{MAX}}$ 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 ⁽²⁾	°C
TIME WITHIN 5 °C OF THE SPECIFIED PEAK TEMPERATURE	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 ⁽²⁾	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