Preliminary Product Specification

CREATIVE GMBH LED®

CQR67406EBB 830nm Infrared LED

creativeled.com

Features:

* High radiant flux
* Thin film structure
* RoHs and REACH conform
* Vertical electrode
* High driving current

Applications

* Fluorescent spectroscopy
* Phototherapy
* Industrial
* Usable for reflow soldering

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	1.5		1.8	V	IF = 100mA
I_R	Reverse Current			10	µA	Vrev = 5V
λ_{Peak}	Peak Wavelength	830		835	nm	IF = 100mA
$\Delta\lambda_{0.5}$	Bandwidth of half power		35		nm	IF = 100mA
t_f	Fall time		3.5		µs	IF = 20mA
t_r	Rise time		7.8		µs	IF = 20mA
Φ_E	Total Radiant Flux	9		10	mW	IF = 20mA
I_e	Radiant Intensitiy	345		590	mW/sr	IF = 100mA
A	Active Array		0.1296		mm²	
$2\Phi_{0.5}$	Full Emission Angle		6		deg.	
TK_{VF}	Temp.Coeff. Of Forward Voltage		-1.6		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			245	°C	Handflow/ Reflow
$Q_{j\text{-}PIN}$	Thermal Resistance		450		K/W	
P_{tot}	Total Power Dissipation @ 100mA			630	mW	

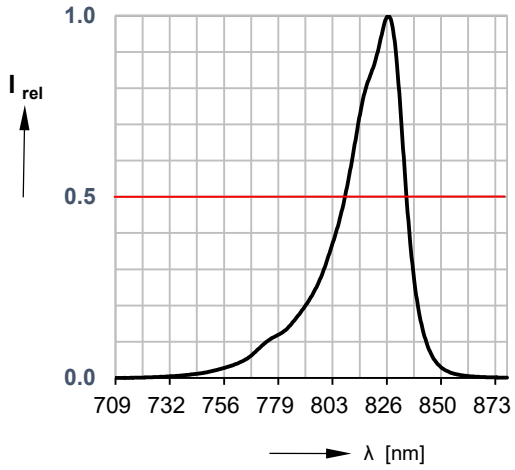
* values only for information

Pls. Contact us for more technical detail information !

Order informations: CQR67406EBB 1500 pcs

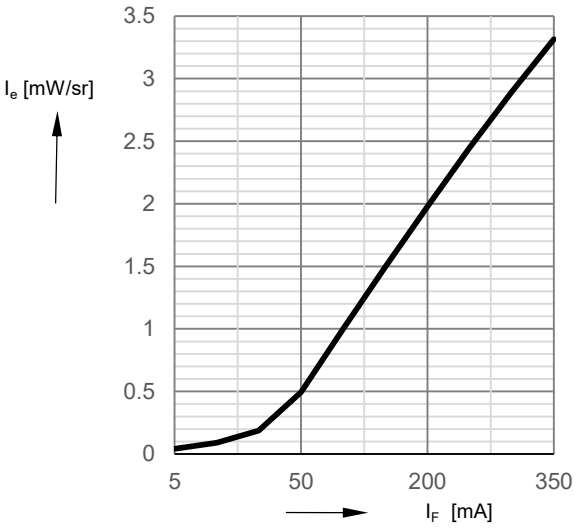
Relative Spectral Emission

@20mA @ $T_{ambient}$ = 25°C



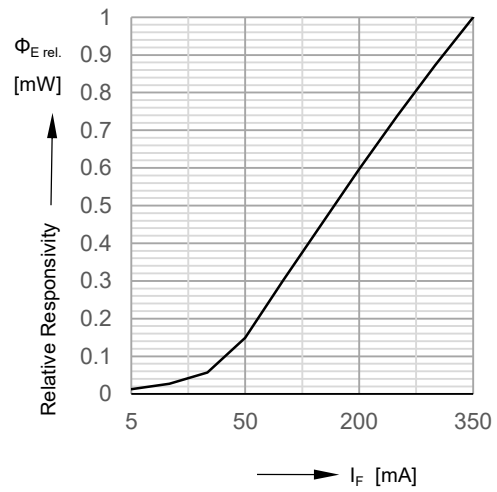
Radiant Intensity

@ $T_{ambient}$ = 25°C



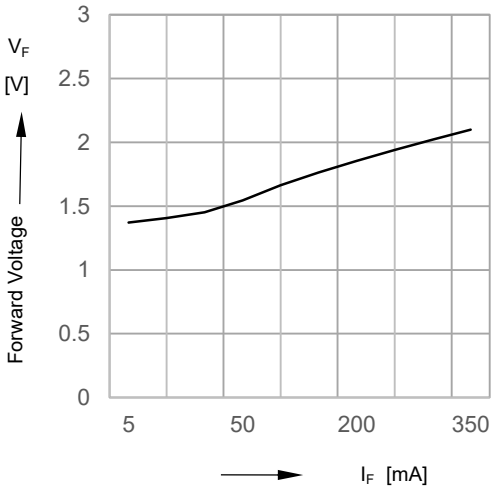
Relative Radiant Flux

@ $T_{ambient}$ = 25°C



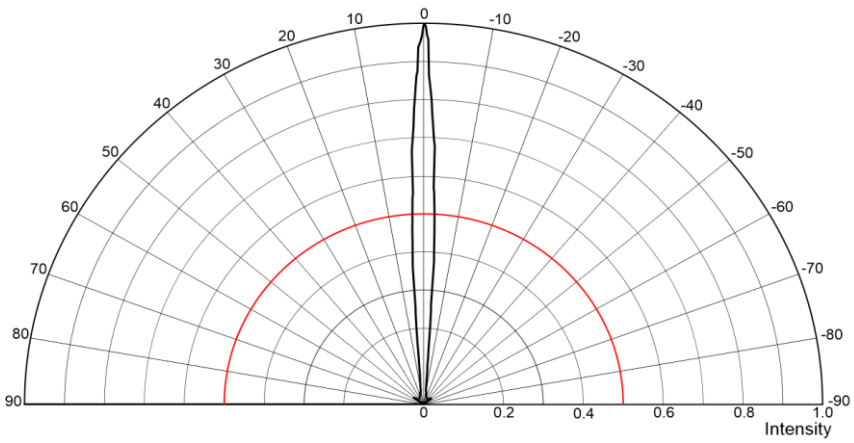
Forward Voltage

@ $T_{ambient}$ = 25°C

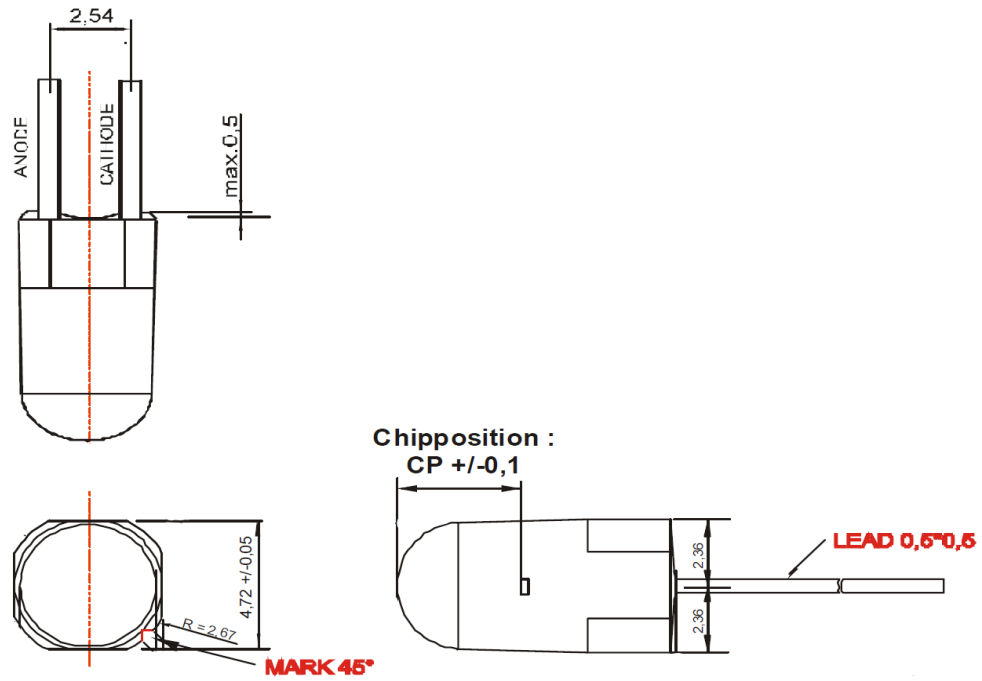


Relative Radiation Angle:

@20mA @ $T_{ambient}$ = 25°C

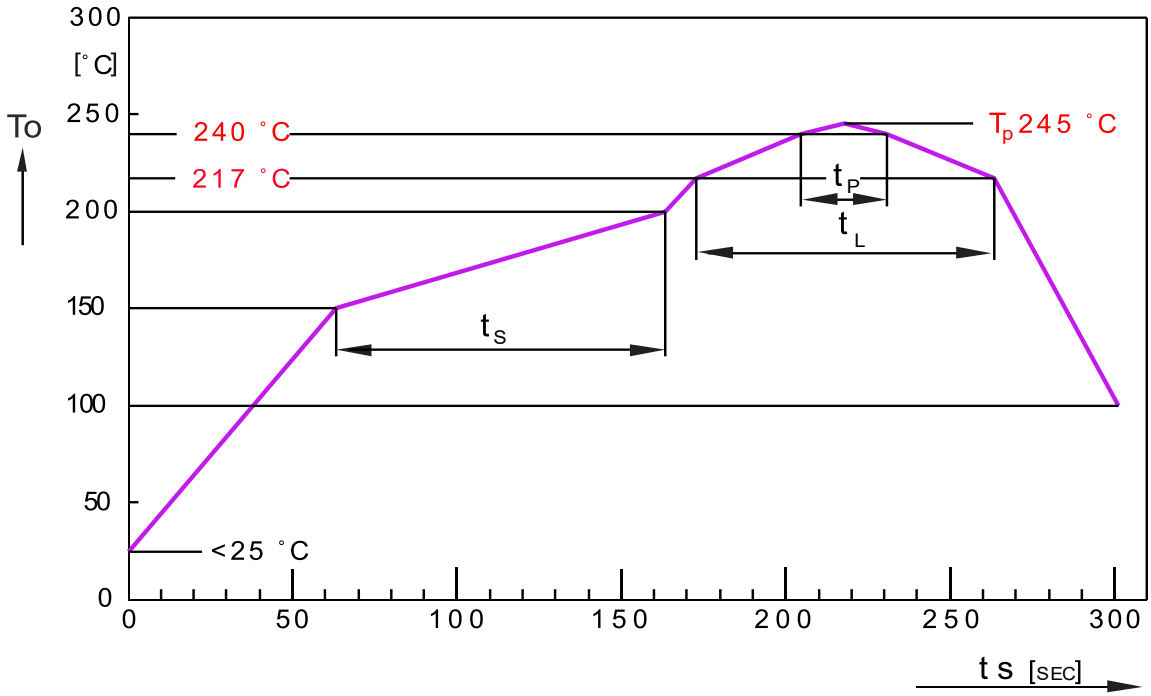


Mechanical Drawing:



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 (1) 25 °C to 150 °C			2	3	K/sec
Time T_S T_{SMIN} to T_{SMAX}	T_S	60	100	120	sec
Ramp-up rate to Peak (1) T_{SMAX} 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 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(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