Product Specification

UV-C LED 255nm CQA45001UBAI

Features

* High Power UV-C LED in LTCC Ceramic Package for long life
* Viewing angle with 6°
* UV resistant glass lens
* Suitable for reflow soldering and automatic placement machine
* ROHS and REACH conform

Applications

* Disinfection
* UV curing
* Fluorescent spectroscopy
* Phototherapy

*** Safety Note :**

This product can be driven with high level risks for human eyes and body acc. IEC 825 and EN62471

Optical and Electrical Characteristics @Tambient =25°C

Symbol	Parameter	min	typ	max	unit	test conditions
I_F	DC Forward current			90	mA	
I_{Peak}	Peak Forward current			180	mA	Tp < 10µsec. ; T=1:100 ; Rtherm < 100K/W
V_F	Forward Voltage	5		6,5	V	IF = 100mA
λ_{Peak}	Peak Wavelength	255		260	nm	IF = 20mA
$\Delta\lambda_{0,5}$	Bandwidth of half power		14		nm	IF = 20mA
t_f	Fall time		8,2		µs	IF = 90mA
t_r	Rise time		2		µs	IF = 90mA
Φ_E	Total Radiant Flux		5,2		mW	IF = 90mA
I_e	Radiant Intensitiy		22	30	mW/sr	IF = 90mA
E_E	Irradiance		3,452		mW/cm²	IF = 90 mA ; Distance 1cm *
A	Active Array		0,19		mm²	
$2\Phi_{0,5}$	Full Emission Angle		6		deg.	ΦE = 50%
TK_{VF}	Temp.Coeff. Of Forward Voltage		-7,1		mV/K	
TK_F	Temp. Coeff. Of Radiant Power		-0,4		%/K	
$T_{Operating}$	Operating Temperature	-30		60	°C	
$T_{Storage}$	Storage Temperature	-40		70	°C	
$T_{Soldering}$	Soldering Temperature			240	°C	Reflow
$Q_{j\text{-}PIN}$	Thermal Resistance		2,3		K/W	
P_{tot}	Total Power Dissipation			585	mW	

* values only for information

Order informations:

CQA45001UBAI Bulk

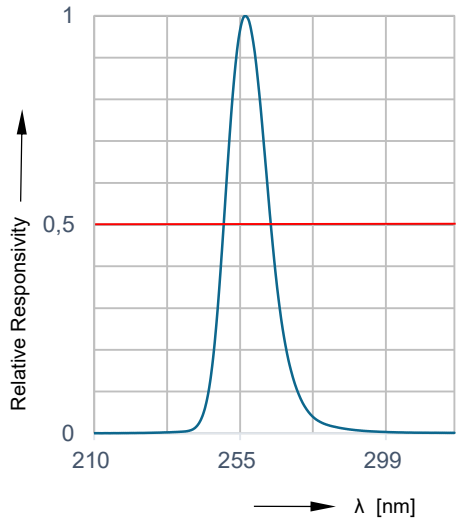
CQA45001UBAI-TR Tape in Reel (1000/reel) on Request only

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.

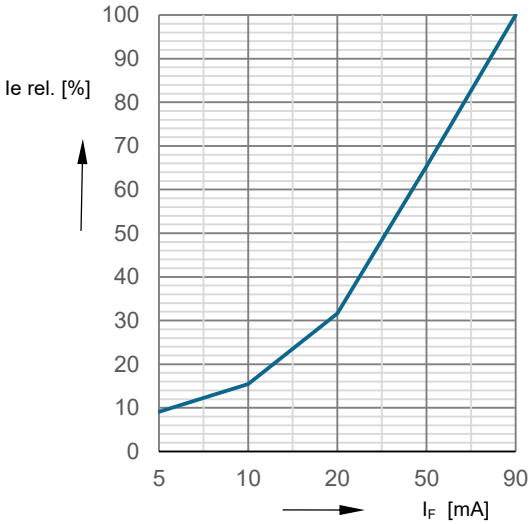
Relative Spectral Emission

@90mA @ $T_{ambient}$ = 25°C



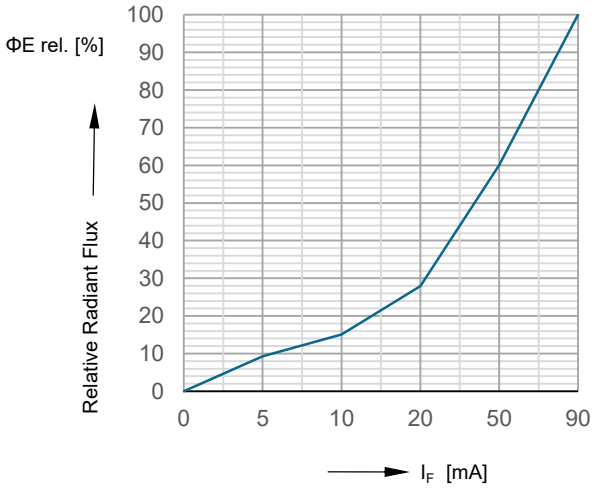
Relative Radiant Intensity

@ $T_{ambient}$ = 25°C



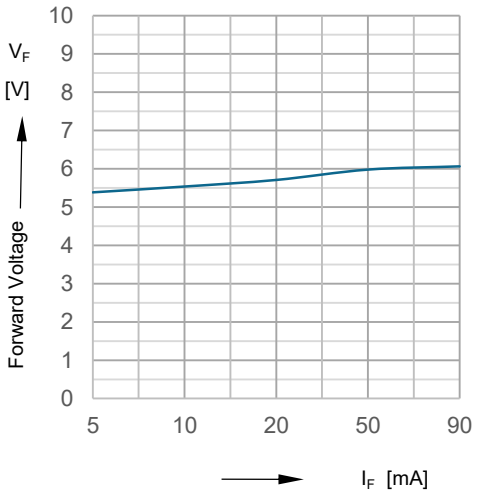
Relative Radiant Flux

@ $T_{ambient}$ = 25°C



Forward Voltage

@ $T_{ambient}$ = 25°C



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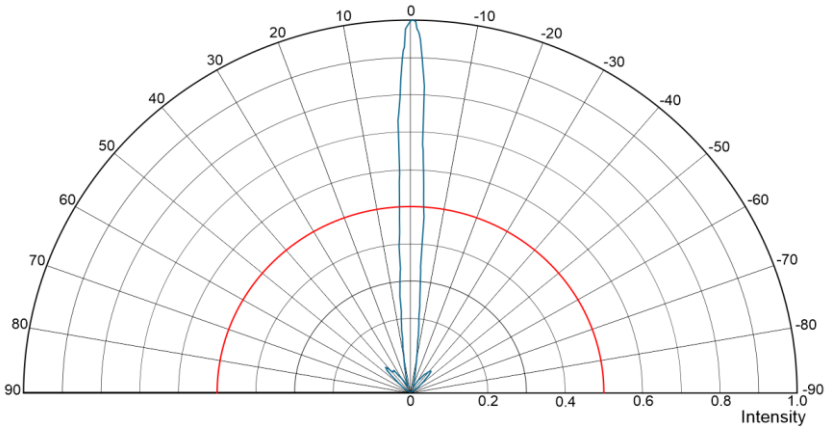
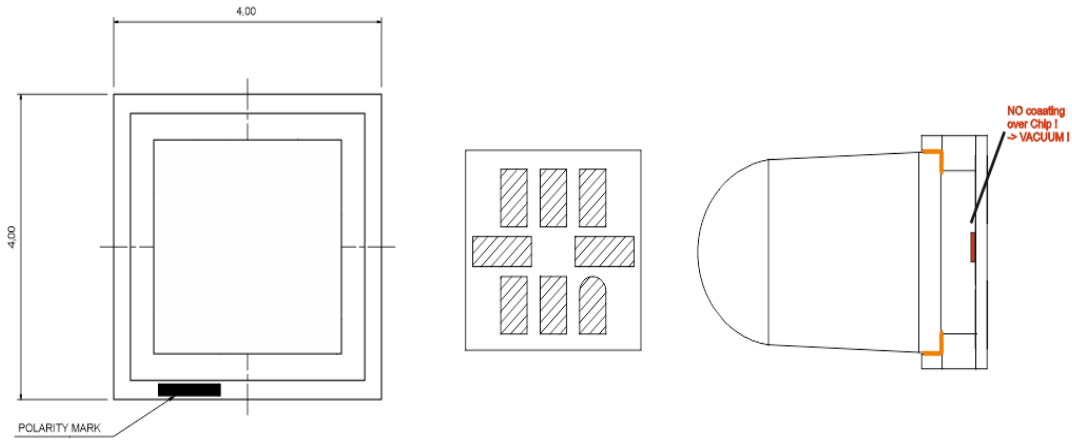
CQA45001UBAI

Relative Radiation Angle

@90mA @ $T_{ambient}$ = 25°C



Mechanical Drawing



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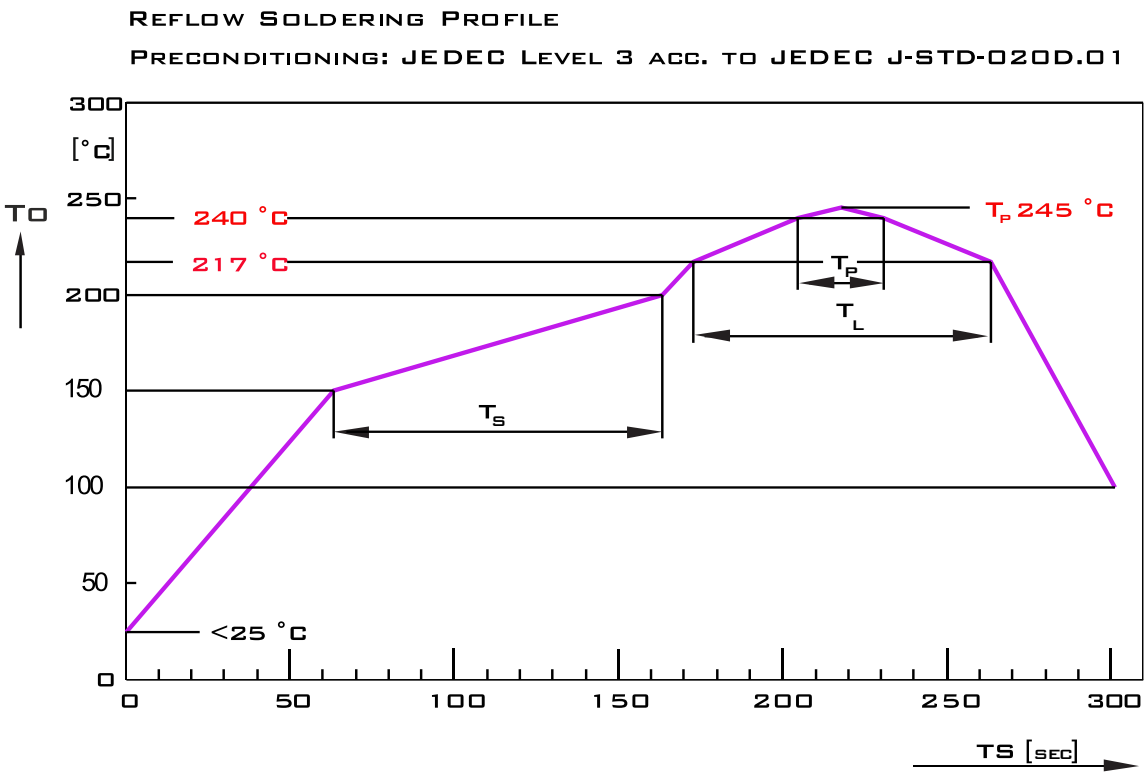
Reflow Soldering Profile:



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

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