

Preliminary Product Specification**CQA97005EAKB****272nm****UV-C LED**

creativeled.com

Features*** Oval beam, ~7° X-axis, ~4° Y-axis (full angle)**

* Vacuumized Ceramic LED

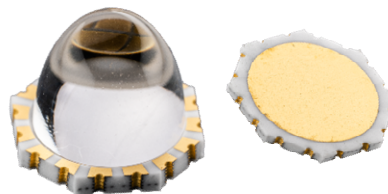
* High power and efficiency

* LTCC Ceramic Package
with glass lens for long life

* Reflow-soldering

*** RoHs and REACH conform**

* Most efficient heat dissipation as backside can be soldered directly to heat sink (non-conductive)

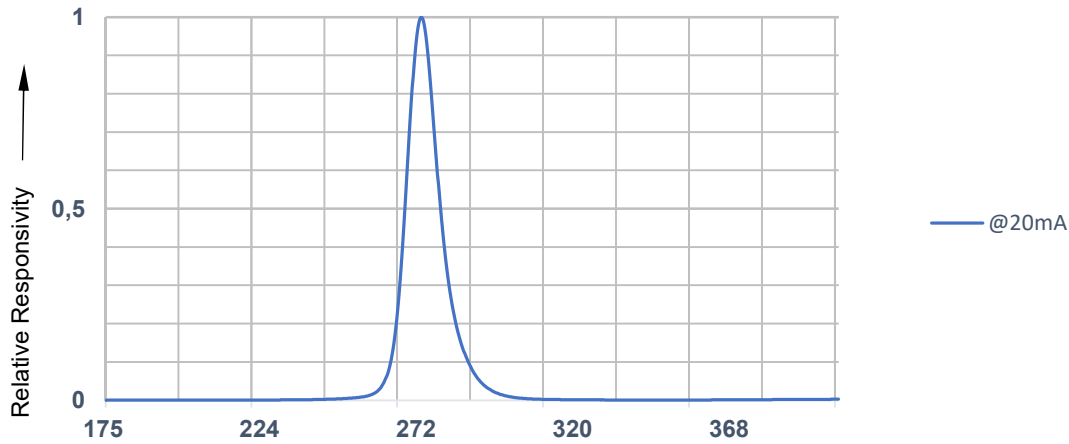
*** Applications**Disinfection
Phototherapy
UV curing
Fluorescent spectroscopy*** Safety Note :****This product can be driven with high
level risks for human eyes and body
acc. IEC 825 and EN62471****Optical and Electrical Characteristics @Tambient =25°C**

Symbol	Parameter	MIN	Typ	MAX	UNIT	Test conditions
I F	DC Forward current			40	mA	
I Peak	Peak Forward current			tba	mA	Tp < 10µsec. ; T=1:100 ; Rtherm < 100K/W
V F	Forward Voltage	6		10	V	IF = 20mA
V R	Reverse Voltage			5	V	Irev = 2µA
λ Peak	Peak Wavelength		272		nm	IF = 20mA
Δλ 0,5	Bandwidth of half power		12		nm	IF = 20mA
t r	Rise time		20		ns	
t f	Fall time		20		ns	
Φ E	Total Power Output		3,7		mW	IF = 20mA
I E	Radiant Intensity		130		mW/sr	IF = 20mA
A	Chip size		0,13		mm²	
2Φ 0,5	Full Emission Angle x-Axis		7		deg.	ΦE = 50%
2Φ 0,5	Full Emission Angle y-Axis		4		deg.	ΦE = 50%
TK VF	Temp.Coeff. Of Forward Voltage				mV/K	
T junction	LED-Junction Temperature			100	°C	
T Soldering	Soldering Temperature			245	°C	acc. recommended soldering temp. profil
T Operating	Operating Temperature	-40		85	°C	
T Storage	Storage Temperature	-40		85	°C	
R thJA	Thermal Resistance		2,5		K/W	
P tot	Total Power Dissipation			400	mW	derate above 45°C 2,5mW/K

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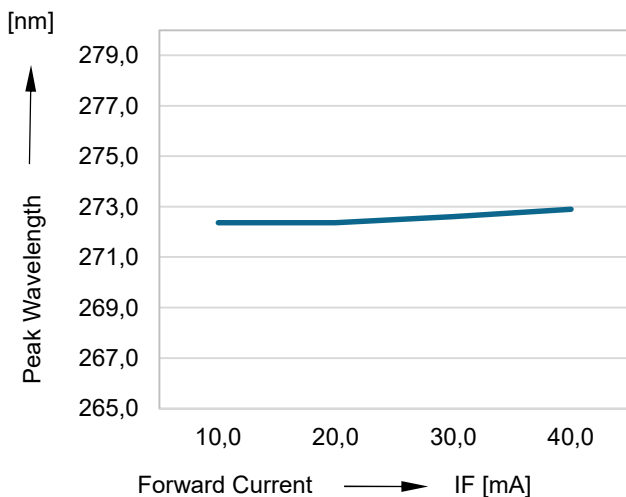
Relative Spectral Emission

@ $T_{\text{ambient}} = 25^{\circ}\text{C}$



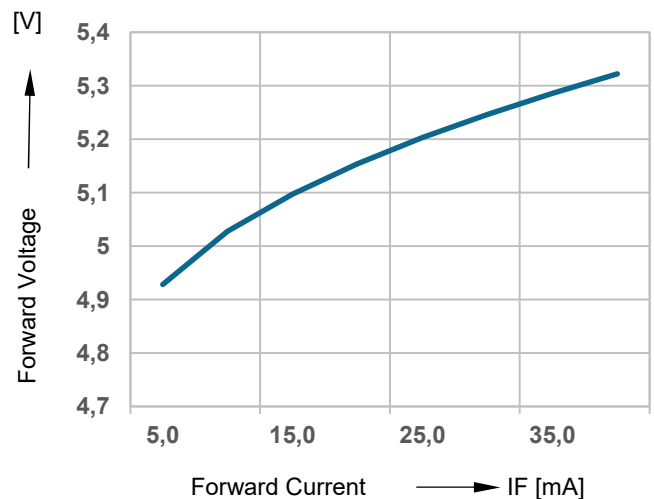
Fwd Current vs. Peak Wavelength

@ $T_{\text{ambient}} = 25^{\circ}\text{C}$



Fwd Voltage vs. Fwd Current

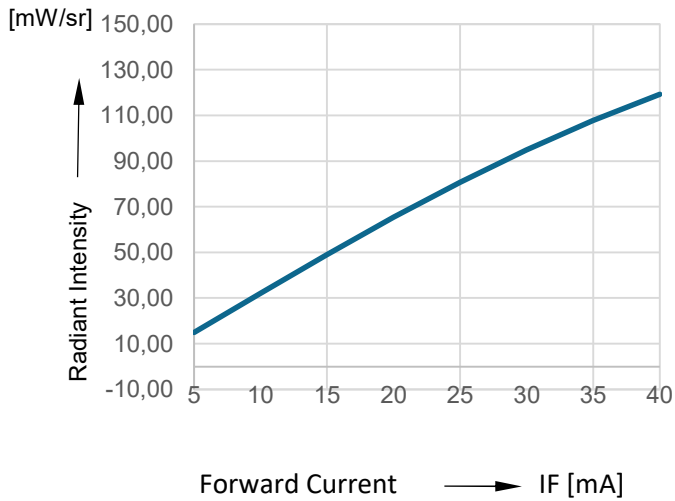
@ $T_{\text{ambient}} = 25^{\circ}\text{C}$



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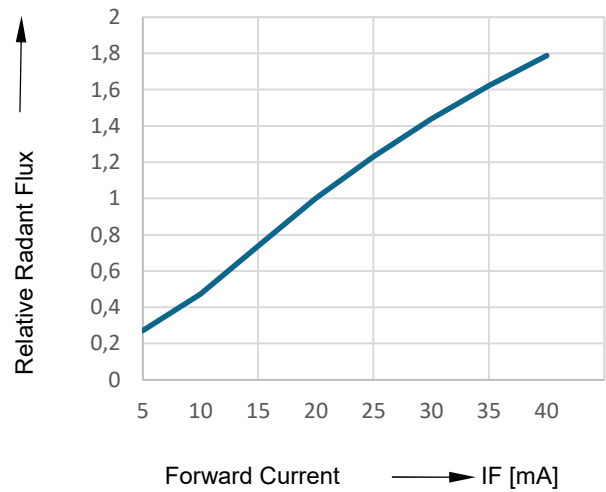
Fwd Current vs. Radiant Intensity

@T_{ambient} = 25°C



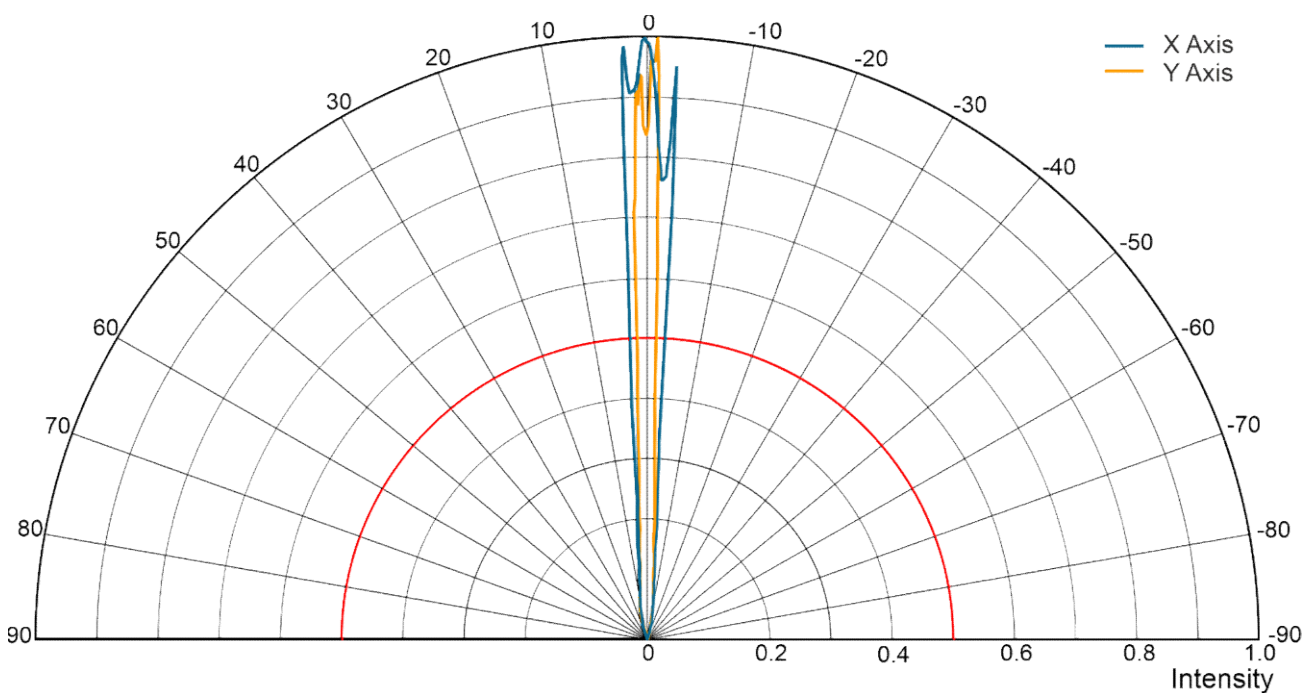
Fwd Current vs. Relative Radiant Flux

@T_{ambient} = 25°C



Relative Radiation Angle

@20mA @ T_{ambient} = 25°C



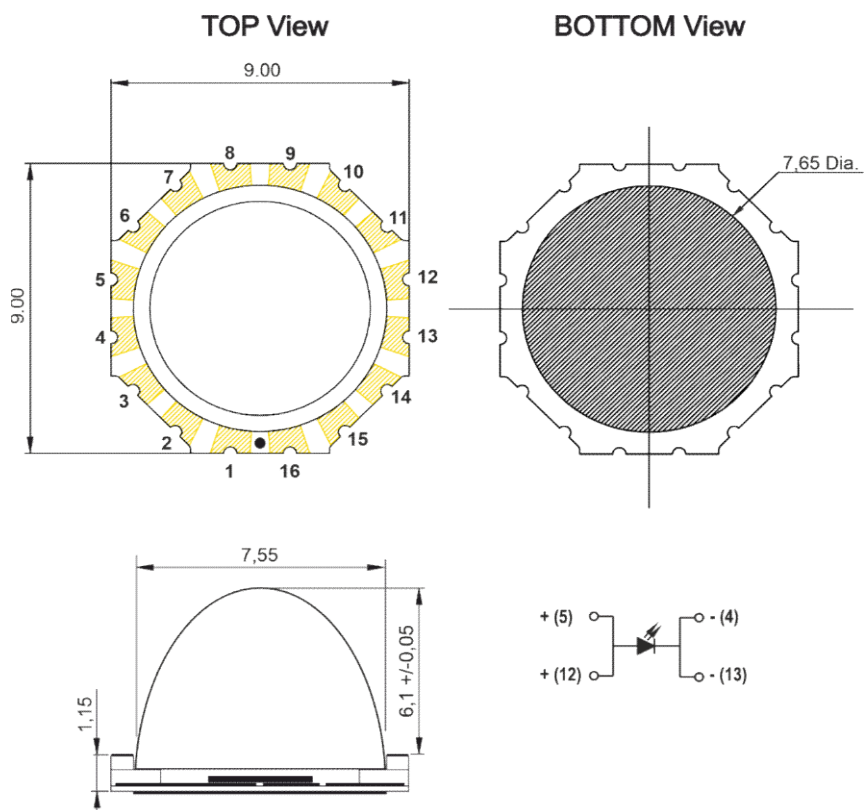
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Order informations:

CQA97005EAKB

Bulk (20pcs./Bag) /standard)

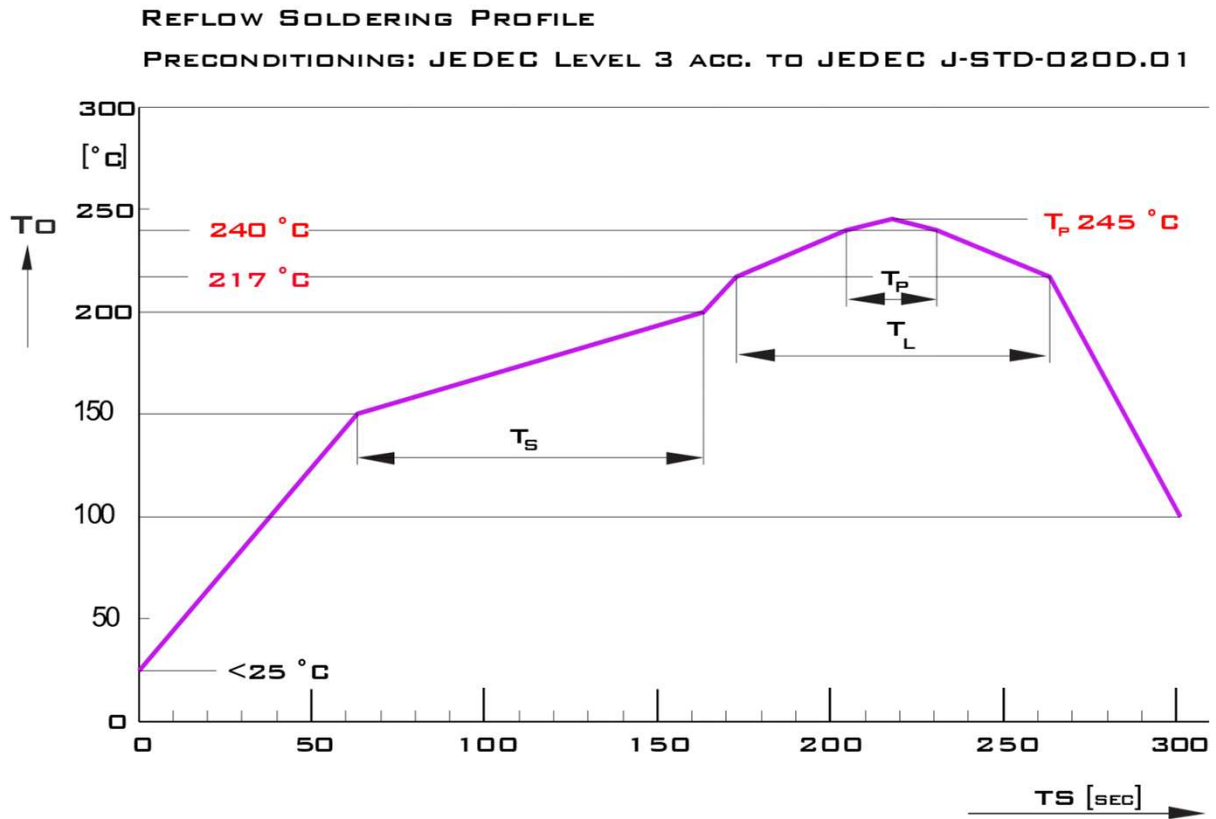
Mechanical Drawing



* The bottom side is not electrically conductive and can be glued or soldered directly to the heat sink.

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Reflow Soldering Profil:



PROFIL FEATURES	SYMBOL	PB-FREE (SNAAGU) ASSEMBLY			UNIT
		MINIMUM	RECOMMENDATION	MAXIMUM	
RAMP-UP RATE TO PREHEAT ⁽¹⁾ 25 °C TO 150 °C			2	3	K/SEC
TIME T _S T _S MIN TO T _S MAX	T _S	60	100	120	SEC
RAMP-UP RATE TO PEAK ⁽¹⁾ T _S 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 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

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.