

Preliminary Product Specification**CQA97005ECV****272nm****UV-C LED**

creativeled.com

Features*** Narrow beam LED with typ. 12°**

* Vacuumized Ceramic LED

* High power and efficiency

* LTCC Ceramic Package
with glass lens for long life

* Reflow-soldering

*** RoHs and REACH conform**

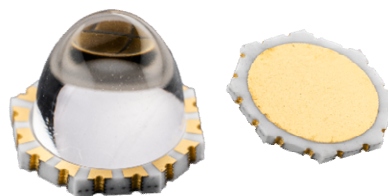
* Most efficient heat dissipation as backside can be soldered directly to heat sink (non-conductive)

*** 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**

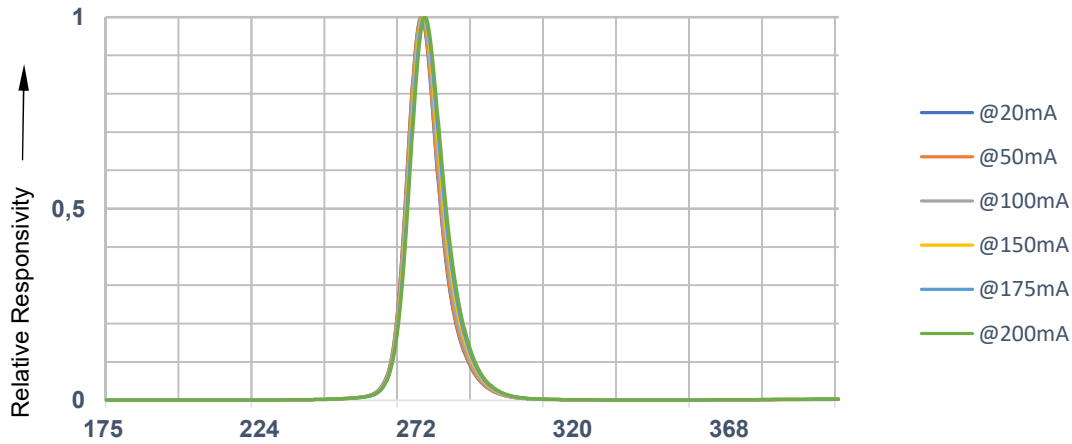
**Optical and Electrical Characteristics @Tambient =25°C**

Symbol	Parameter	MIN	Typ	MAX	UNIT	Test conditions
I F	DC Forward current			180	mA	
I Peak	Peak Forward current			tba	mA	Tp < 10µsec. ; T=1:100 ; Rtherm < 100K/W
V F	Forward Voltage	6		10	V	IF = 500mA
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		16		mW	IF = 150mA
I E	Radiant Intensity		150		mW/sr	IF = 150mA
A	Chip size		0,6		mm²	
2Φ 0,5	Full Emission Angle		12		deg.	ΦE = 50%
TK VF	Temp.Coeff. Of Forward Voltage				mV/K	
T junction	LED-Junction Temperature			95	°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			1800	mW	derate above 45°C 2,5mW/K

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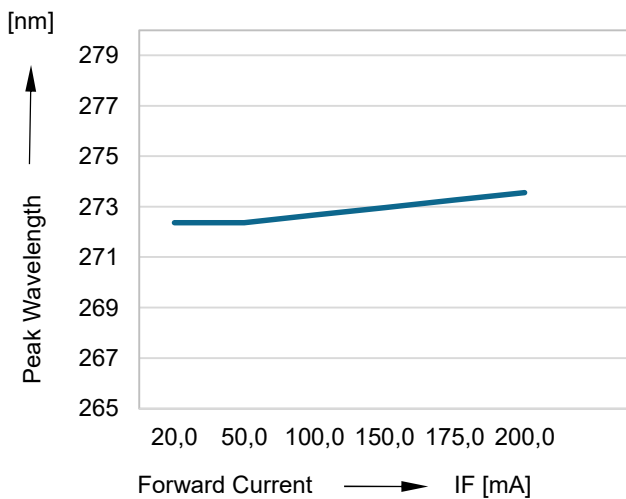
Relative Spectral Emission

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



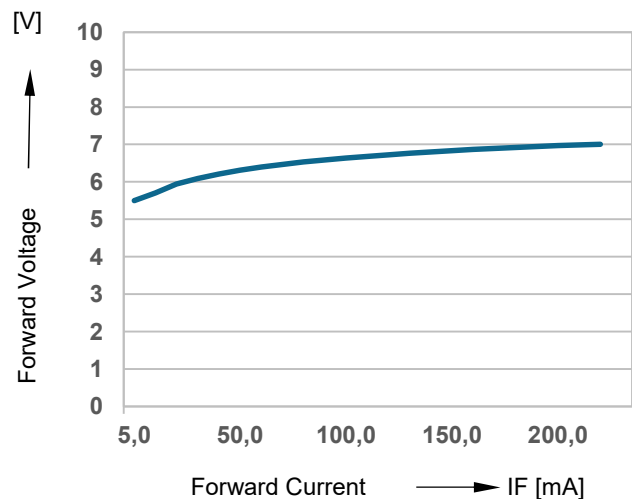
Fwd Current vs. Peak Wavelength

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



Fwd Voltage vs. Fwd Current

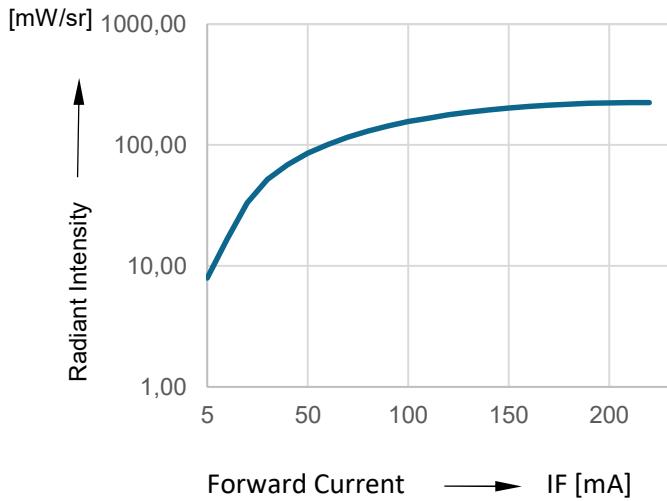
@ $T_{\text{ambient}} = 25^{\circ}\text{C}$



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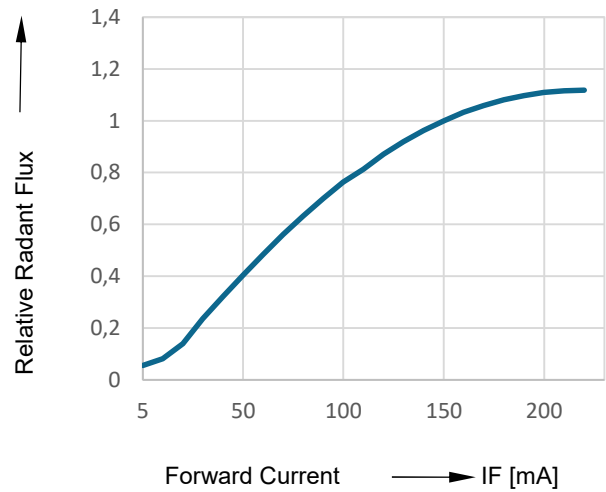
Fwd Current vs. Radiant Intensity

@T_{ambient} = 25°C



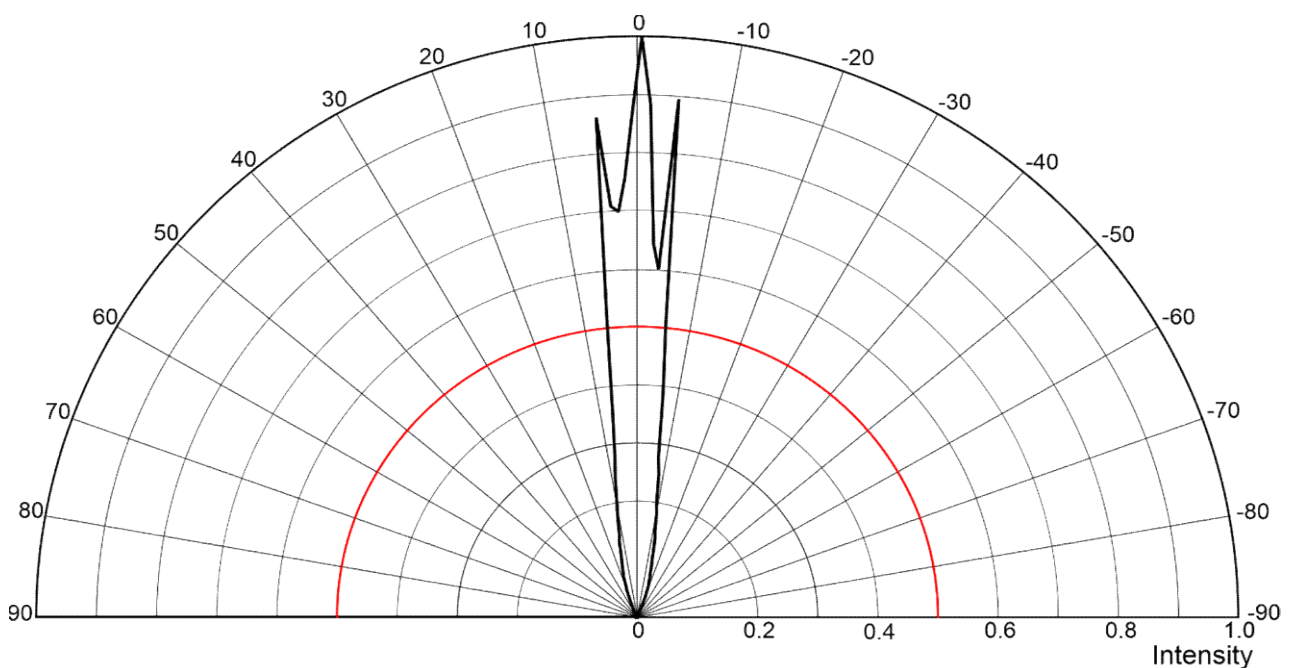
Fwd Current vs. Relative Radiant Flux

@T_{ambient} = 25°C



Relative Radiation Angle

@20mA @ T_{ambient} = 25°C



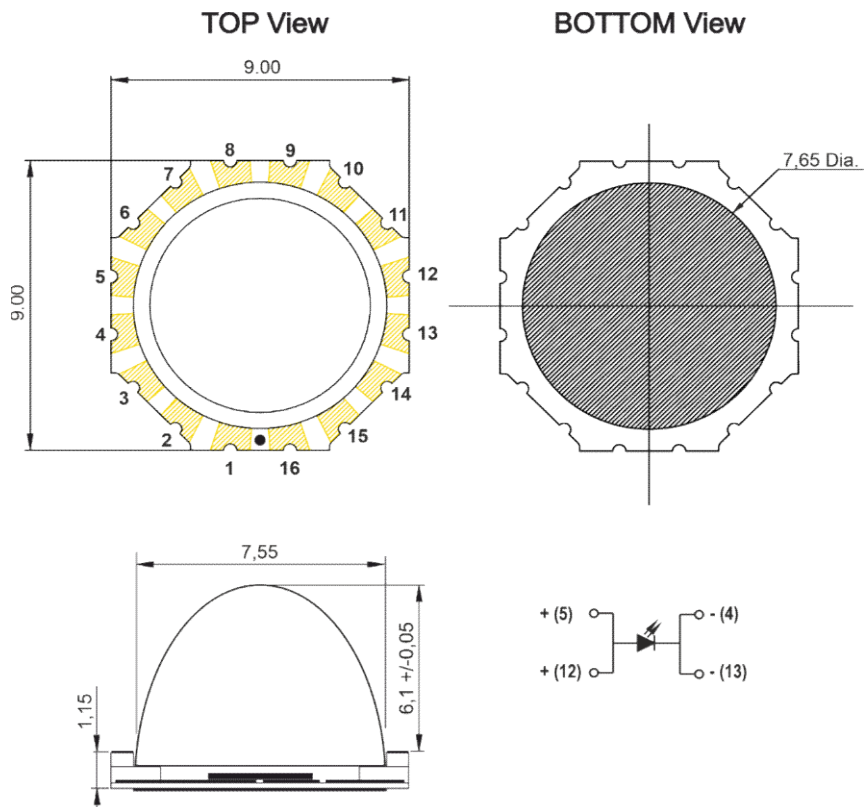
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Order informations:

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Bulk (20pcs./Bag) /standard)

Mechanical Drawing



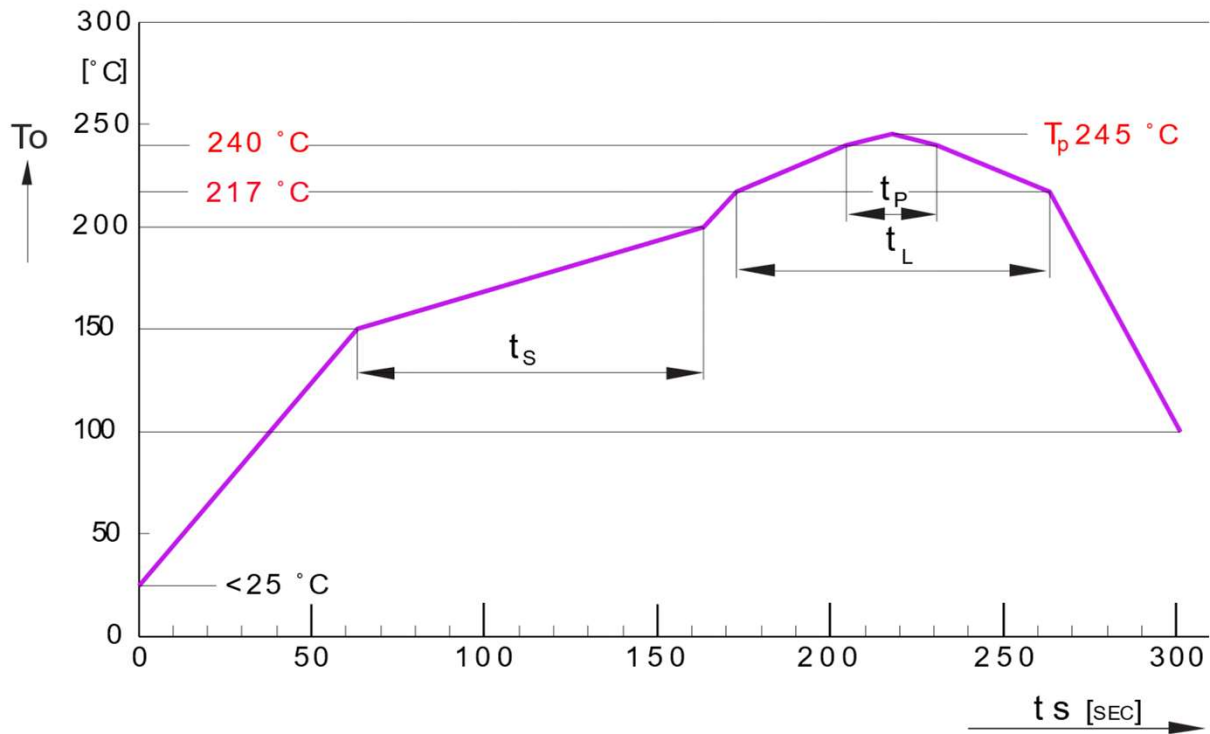
* The bottom side is not electrically conductive and can be glued or soldered directly to the heat sink.

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Reflow Soldering Profil:

Reflow Soldering Profile

Preconditioning: JEDEC Level 3 acc. to JEDEC J-STD-020D.01



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 $T_{S\text{MIN}}$ 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 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.