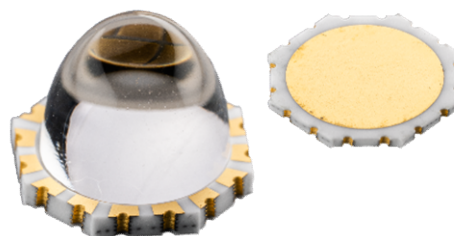


Product Specification**CQA97592BDF****850nm****Infrared LED**

creativeled.com

Features

- * SMD LED with typ. Radiation of 16 degree full beam angle
- * Seperate Anode and Cathode connection
- * High Power and efficiency
- * Reflow Solderable acc. JEDEC J-STD-020D
- * Very Low Thermal Resistance (< 5K/W) based on LTCC-Substrate with AG-Slugs
- * RoHs and REACH conform
- * Electrical isolation thermal pad for direct soldering on heat-sink without any isolation layer for best heat transfer

**Applications**

IR- Flash-Light
 Medical instruments
 Light Interrupter and switches

*** Safety Note:**

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

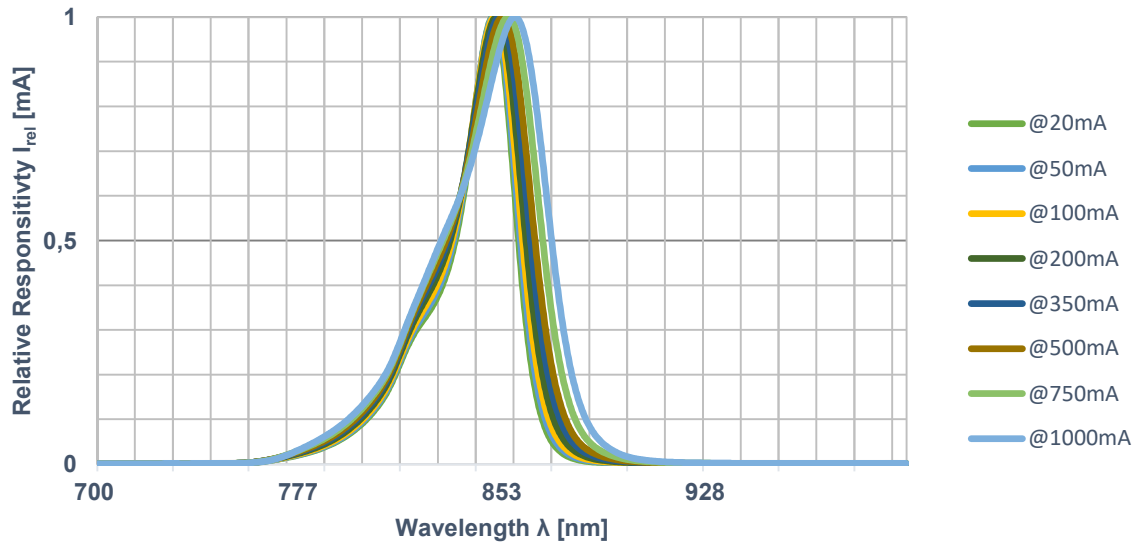
Optical and Electrical Characteristics @Tambient =25°C

Symbol	Parameter	MIN	Typ	MAX	UNIT	Test conditions
I F	DC Forward current		350	1000	mA	
I Peak	Peak Forward current			2500	mA	Tp < 10µsec. ; T=1:100 ; Rtherm < 100K/W
V F	Forward Voltage		1,55	1,9	V	IF = 350mA
V F	Forward Voltage		1,74	2,0	V	IF = 700mA
V R	Reverse Voltage			5	V	Irev = 10µA
λ Peak	Peak Wavelength	545	850	855	nm	IF = 350mA
λ centroid	Centroid Wavelength		261		nm	IF = 20mA
Δλ 0,5	Bandwide of half power		30		nm	IF = 350mA
Φ E	Total Power Output	485	500	510	mW	IF = 700mA
Φ E	Total Power Output	610	635	655	mW	IF = 1A
I E	Radiant Intensity	1600	1900	2300	mW/sr	IF = 350mA
I E	Radiant Intensity	3400	3800	4700	mW/sr	IF = 700mA
I E	Radiant Intensity	4500	4900	5600	mW/sr	IF = 1000mA
2Φ 0,5	Full Emission Angle		16		deg.	ΦE = 50%
TK VF	Temp.Coeff. Of Forward Voltage		2		mV/K	
TK F	Temp. Coeff. Of Radiant Power		0,3		%/K	
T junction	LED-Junction Temperature		110	115	°C	
T Soldering	Soldering Temperature			240	°C	REFLOW SOLDER
T Operating	Operating Temperature	-25		85	°C	IFmax < 350mA
T Storage	Storage Temperature	-25		85	°C	
R thJA	Thermal Resistance		2,3		K/W	
P tot	Total Power Dissipation			1900	mW	

CQA97592BDF

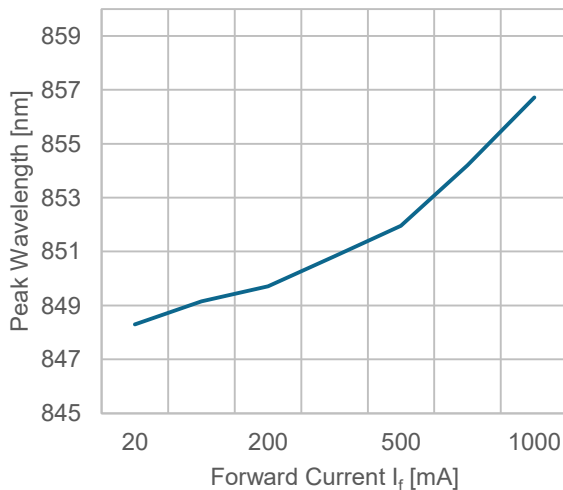
Relative Spectral Emission

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



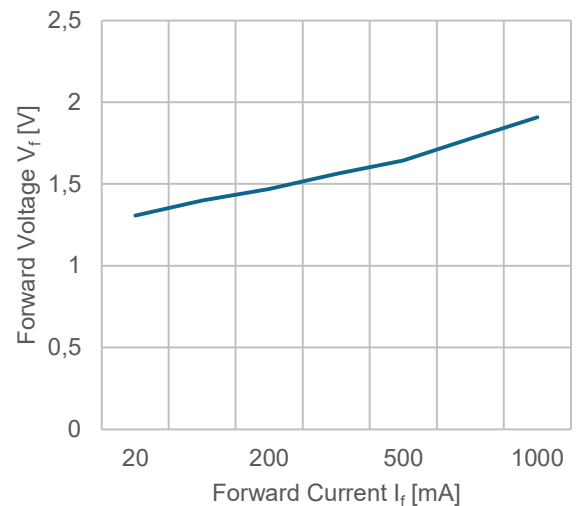
Fwd Current vs. Peak Wavelength

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



Fwd Voltage vs. Fwd Current

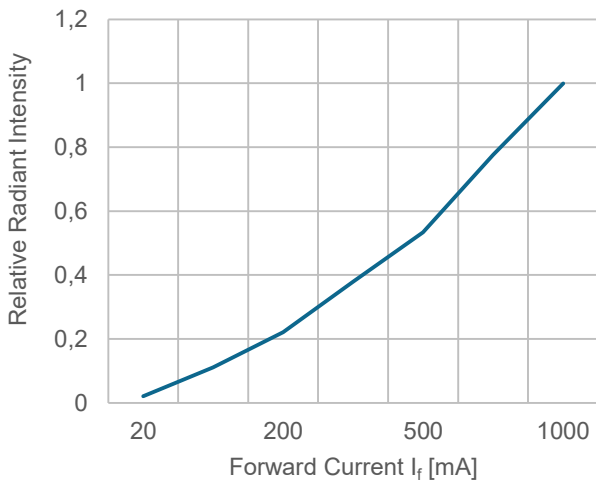
@ $T_{\text{ambient}} = 25^{\circ}\text{C}$



CQA97592BDF

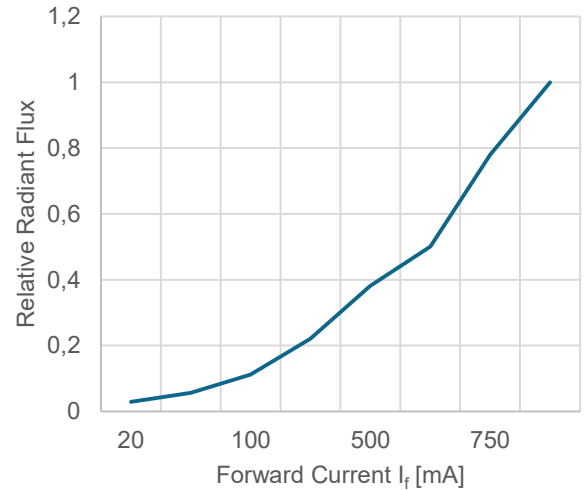
Fwd Current vs. Relative Radiant Intensity

@T_{ambient} = 25°C



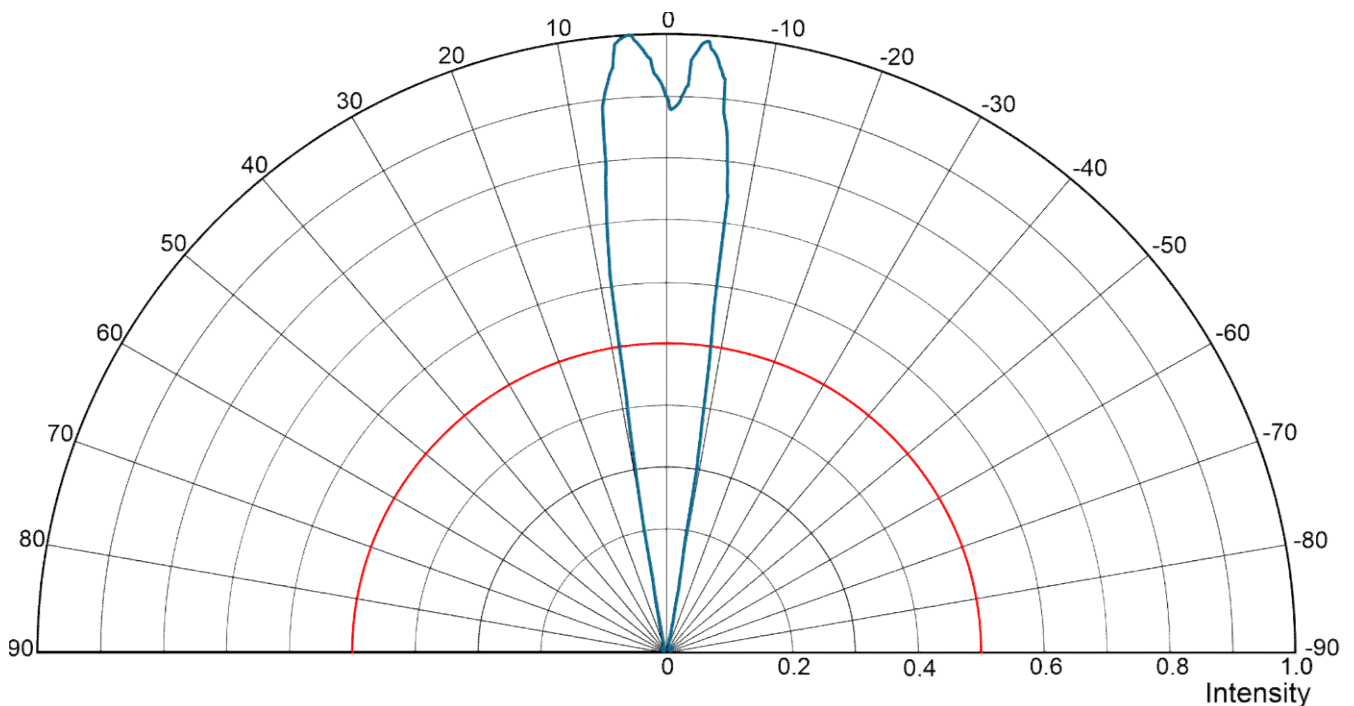
Fwd Current vs. Radiant Flux

@T_{ambient} = 25°C



Relative Radiation Angle

@20mA @ T_{ambient} = 25°C



Pls. Contact us for more technical detail information !

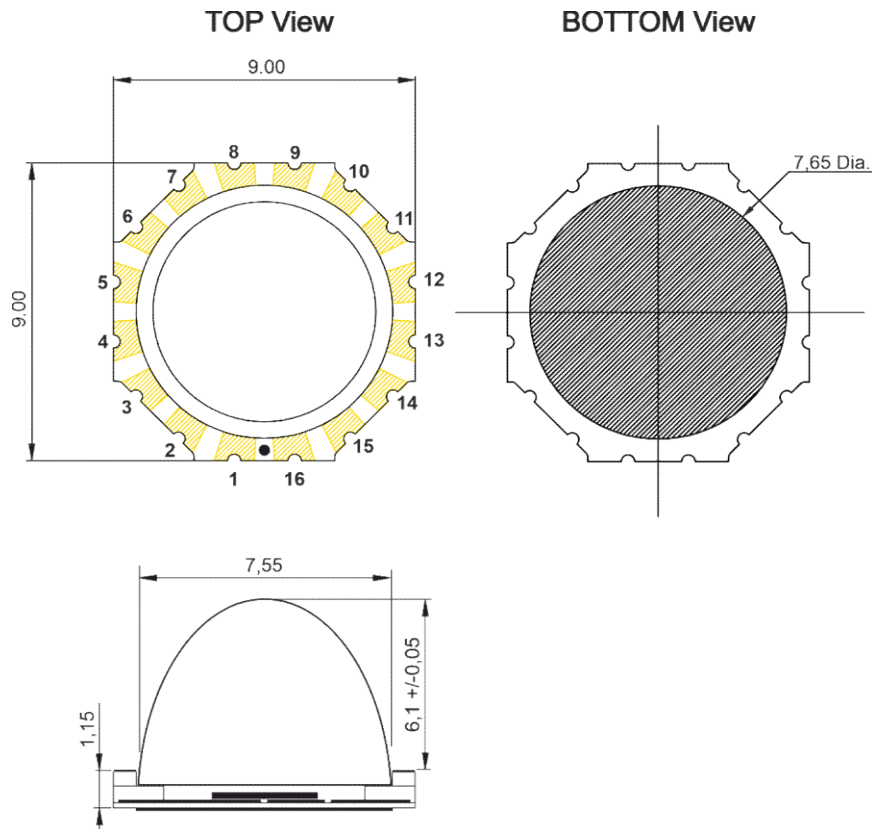
CQA97592BDF

Order informations:

CQA97592BDF

Bulk (20pcs./Bag) /standard)

Mechanical Drawing



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

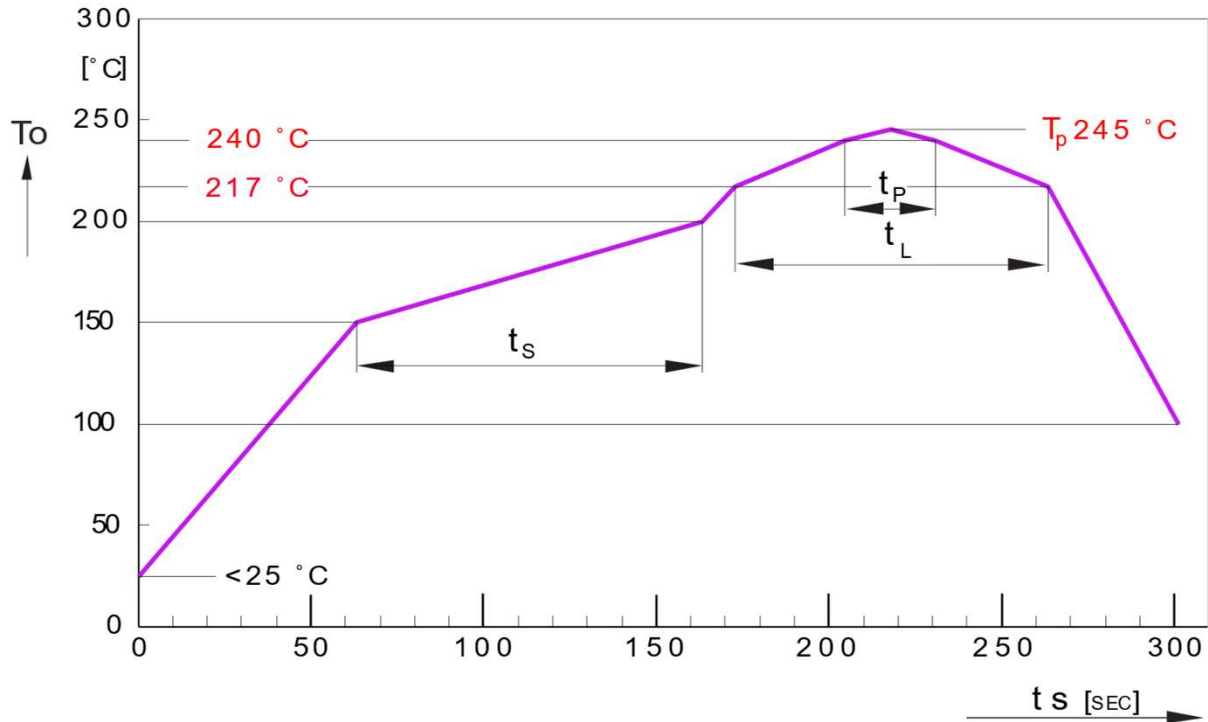
CREATIVE LED GMBH reserves the right to make changes at any time in order to improve design and to supply the best product possible, contact us for latest device specification sheets before using.

CQA97592BDF

Reflow Soldering Profil:

Reflow Soldering Profile

Prec onditioning: 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 PEAK TEMPERATURE	T_{P-SK}	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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