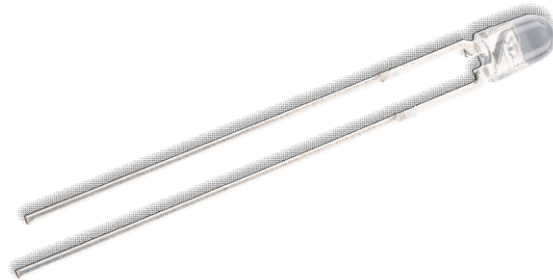


Product Specification**CQT55513ARA****850nm****Infrared LED**

creativeled.com

Features

- * Standard design LED for general purpose
- * Based on double hetero structure of GaAlAs
- * **Very wide plateau of typically 40 degrees**
- * Medium power for T1 case with 90° full angle
- * Fast switching time : typ. < 20ns
- * Water-clear package style without stand-off
- * **RoHS and REACH conform**

**Applications**

CCD/CMOS-CCT Illumination
 Medical Instruments
 Light Interrupter and switches
 Oper-Air communication / IrDa

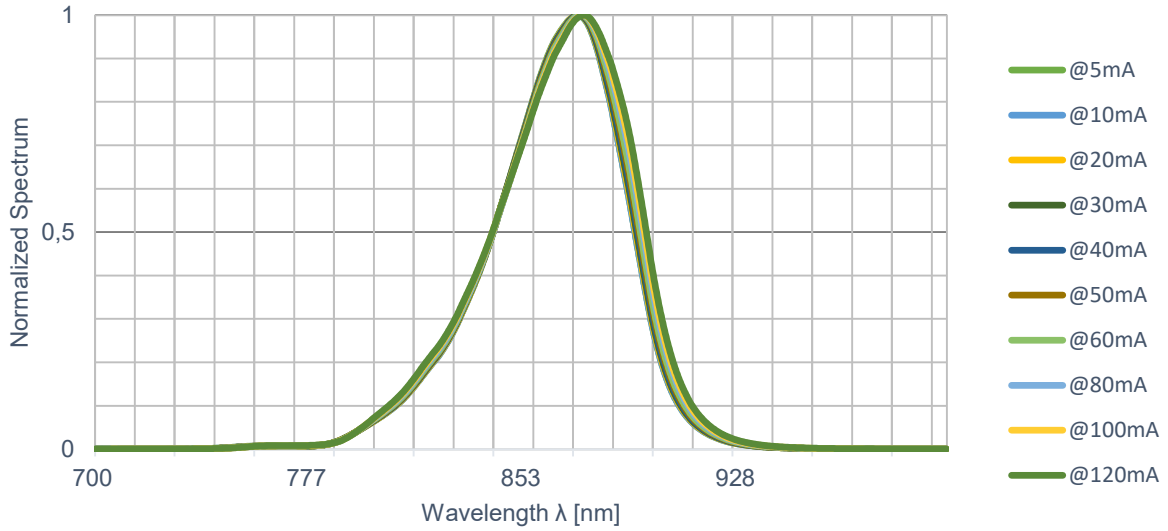
Optical and Electrical Characteristics @Tambient =25°C

Symbol	Parameter	MIN	Typ	MAX	UNIT	Test conditions
I F	DC Forward current			100	mA	
I Peak	Peak Forward current			1500	mA	Tp < 10µsec. ; T=1:100 ; Rtherm < 100K/W
V F	Forward Voltage	1,3		2,1	V	IF = 100mA
V R	Reverse Voltage	5,0			V	Irev = 10µA
λ Peak	Peak Wavelength		875		nm	IF = 100mA
Δλ 0,5	Bandwidth of half power		50		nm	IF = 100mA
t r	Rise time		20		ns	
t f	Fall time		20		ns	
Φ E	Total Power Output	52	55		mW	IF = 100mA
I E	Radiant Intensity		24		mW/sr	IF = 100mA
A	Chip size		0,13		mm²	
2Φ 0,5	Full Emission Angle	87	90	93	deg.	ΦE = 50%
TK VF	Temp.Coeff. Of Forward Voltage		-2		mV/K	
TK F	Temp. Coeff. Of Radiant Power		-0,4		%/K	
T junction	LED-Junction Temperature		110	115	°C	
T Soldering	Soldering Temperature			240	°C	5mm from case @ 5 sec.
T Operating	Operating Temperature	-25		85	°C	
T Storage	Storage Temperature	-25		85	°C	
R thJA	Thermal Resistance		450		K/W	
P tot	Total Power Dissipation			210	mW	derate above 45°C 2,5mW/K

CQT55513ARA

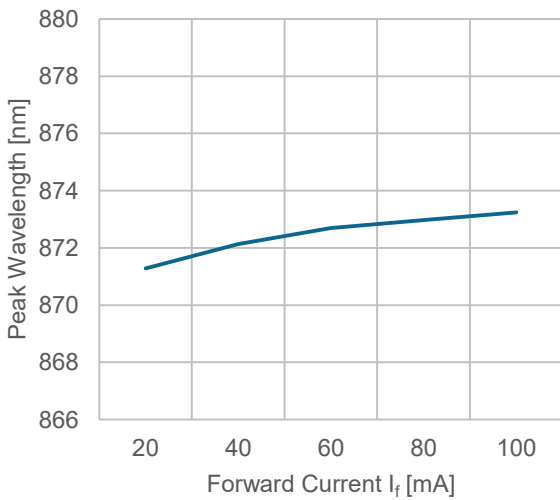
Relative Spectral Emission

@ T_{ambient} = 25°C



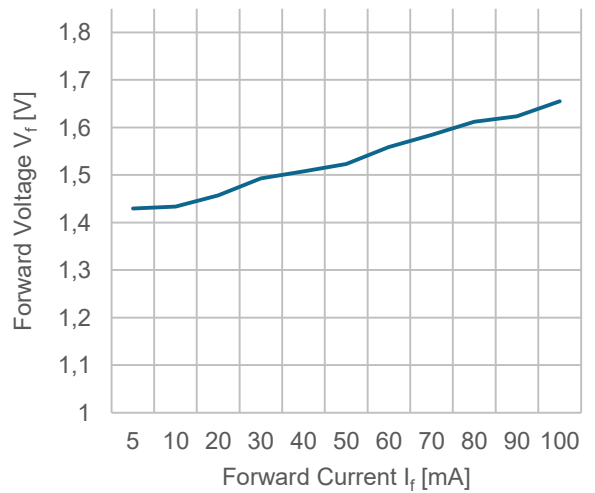
Fwd Current vs. Peak Wavelength

@ T_{ambient} = 25°C



Fwd Voltage vs. Fwd Current

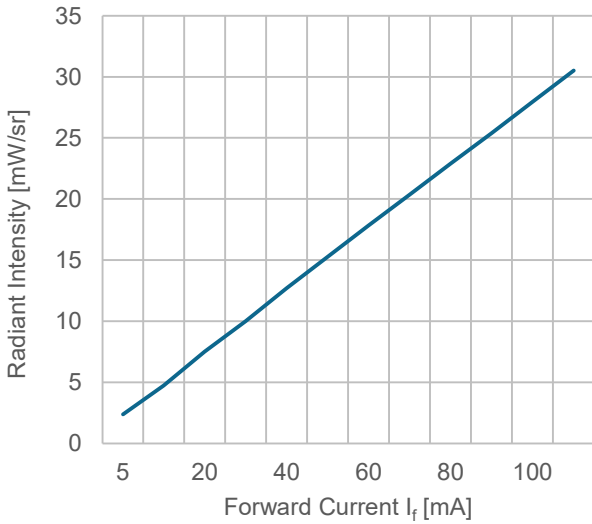
@ T_{ambient} = 25°C



CQT55513ARA

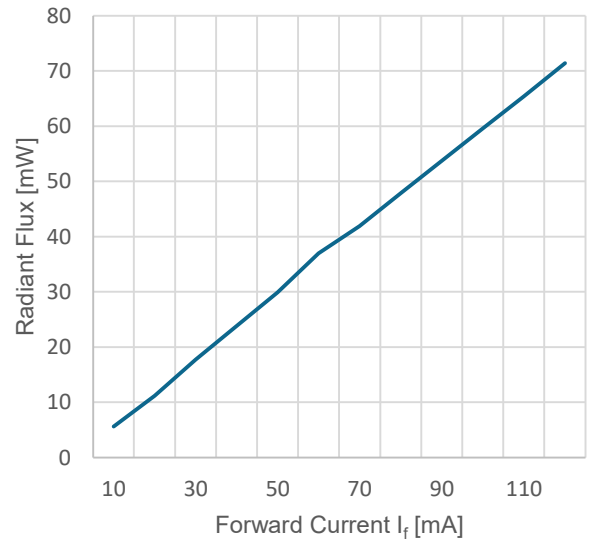
Fwd Current vs. Radiant Intensity

@T_{ambient} = 25°C



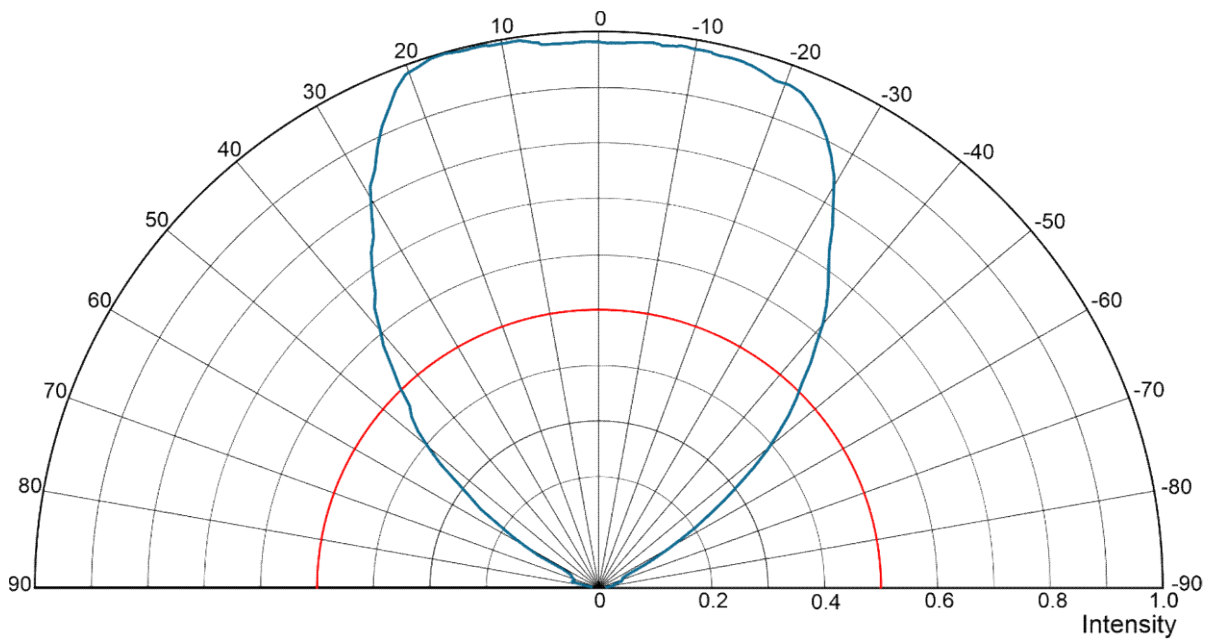
Fwd Current vs. Radiant Flux

@T_{ambient} = 25°C



Relative Radiation Angle

@20mA @ T_{ambient} = 25°C



Pls. Contact us for more technical detail information !

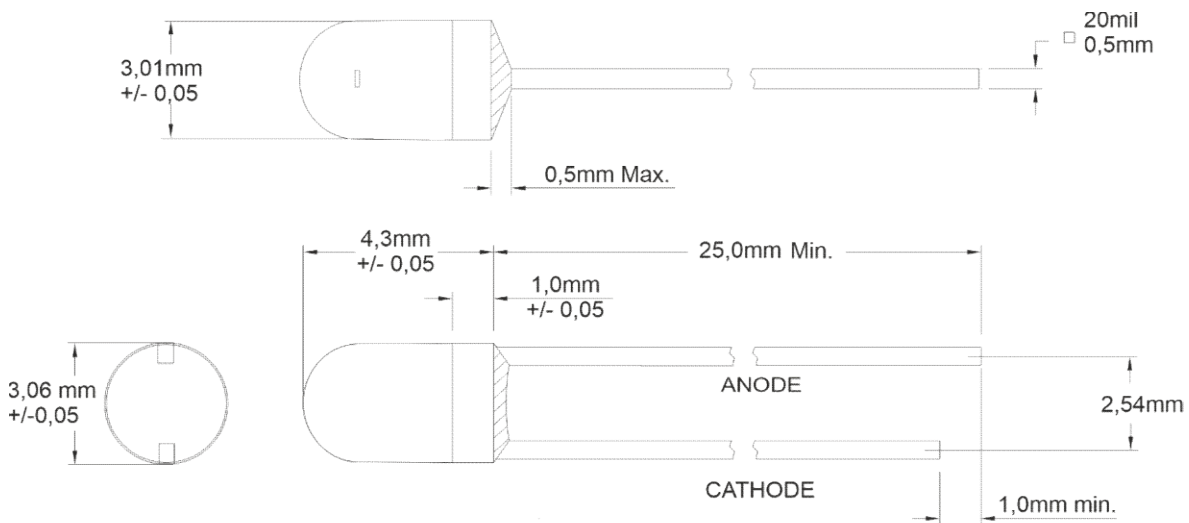
CQT55513ARA

Order informations:

CQT55513ARA
 CQT55513ARA-TR
 CQT55513ARA-TC

Bulk (1000pcs/bag)
 Taped in Reel (1500pcs/reel; lens top in the tape)
 Bended according to customer specification (on request)

Mechanical Drawing



ALL TOLERANCE SHALL BE \pm 8mil / 0,2mm

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.