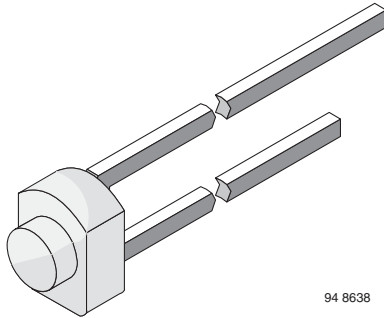


Infrared Emitting Diode, RoHS Compliant, 950 nm, GaAs



FEATURES

- Package type: leaded
- Package form: T-¾
- Dimensions (in mm): Ø 1.8
- Peak wavelength: $\lambda_p = 950$ nm
- High reliability
- Angle of half intensity: $\varphi = \pm 55^\circ$
- Low forward voltage
- Suitable for high pulse current operation
- Good spectral matching with Si photodetectors
- Package matches with detector BPW16N
- Compliant to RoHS Directive 2002/95/EC and in accordance with WEEE 2002/96/EC


RoHS
COMPLIANT

DESCRIPTION

CQY36N is an infrared, 950 nm emitting diode in GaAs technology molded in a miniature, clear plastic package without lens.

APPLICATIONS

- Radiation source in near infrared range

PRODUCT SUMMARY

COMPONENT	I_e (mW/sr)	φ (deg)	λ_p (nm)	t_r (ns)
CQY36N	1.5	± 55	950	800

Note

- Test conditions see table "Basic Characteristics"

ORDERING INFORMATION

ORDERING CODE	PACKAGING	REMARKS	PACKAGE FORM
CQY36N	Bulk	MOQ: 5000 pcs, 5000 pcs/bulk	T-¾

Note

- MOQ: minimum order quantity

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25^\circ\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage		V_R	5	V
Forward current		I_F	100	mA
Surge forward current	$t_p \leq 100 \mu\text{s}$	I_{FSM}	2	A
Power dissipation		P_V	160	mW
Junction temperature		T_j	100	$^\circ\text{C}$
Operating temperature range		T_{amb}	- 25 to + 85	$^\circ\text{C}$
Storage temperature range		T_{stg}	- 25 to + 100	$^\circ\text{C}$
Soldering temperature	$t \leq 3$ s	T_{sd}	245	$^\circ\text{C}$
Thermal resistance junction/ambient	leads not soldered	R_{thJA}	450	K/W

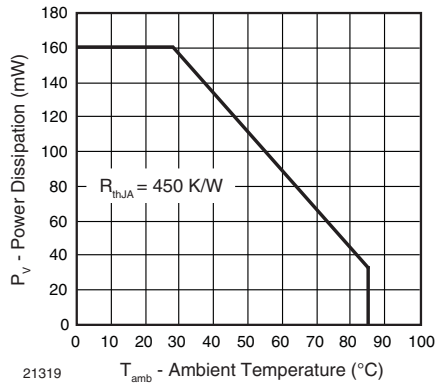


Fig. 1 - Power Dissipation Limit vs. Ambient Temperature

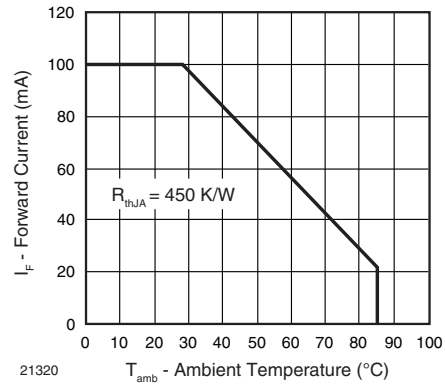


Fig. 2 - Forward Current Limit vs. Ambient Temperature

BASIC CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I _F = 50 mA, t _p ≤ 20 ms	V _F		1.3	1.6	V
Temperature coefficient of V _F	I _F = 100 mA	TK _{V_F}		- 1.3		mV/K
Breakdown voltage	I _R = 100 μA	V _(BR)	5			μA
Junction capacitance	V _R = 0 V, f = 1 MHz, E = 0	C _j		50		pF
Radiant intensity	I _F = 50 mA, t _p ≤ 20 ms	I _e	0.7	1.5	2.1	mW/sr
Radiant power	I _F = 50 mA, t _p ≤ 20 ms	φ _e		10		mW
Temperature coefficient of φ _e	I _F = 50 mA	TKφ _e		- 0.8		%/K
Angle of half intensity		φ		± 55		deg
Peak wavelength	I _F = 50 mA	λ _p		950		nm
Spectral bandwidth	I _F = 50 mA	Δλ		50		nm
Rise time	I _F = 100 mA	t _r		800		ns
	I _F = 1.5 A, t _p /T = 0.01, t _p ≤ 10 μs	t _r		400		ns
Virtual source diameter		d		1.2		mm

BASIC CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

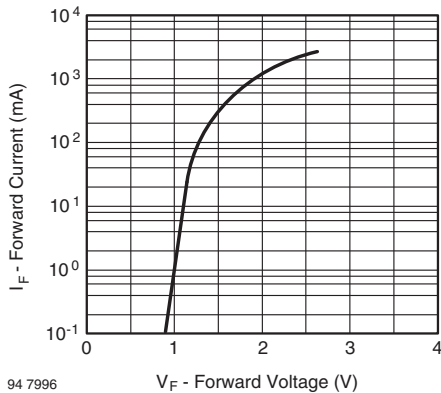


Fig. 3 - Forward Current vs. Forward Voltage

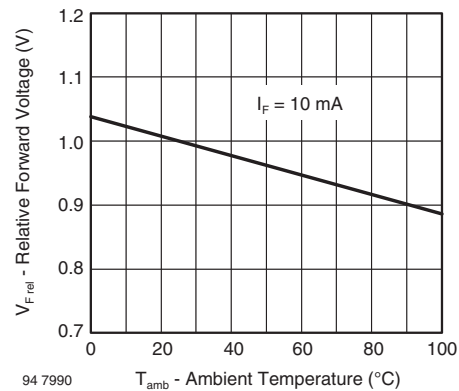


Fig. 4 - Relative Forward Voltage vs. Ambient Temperature

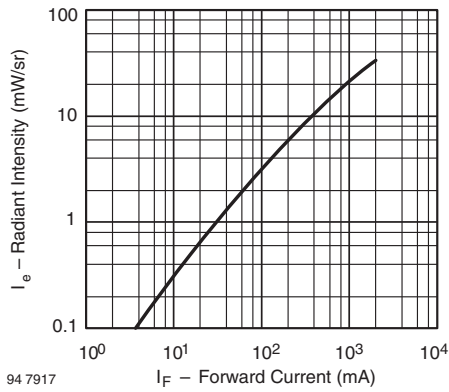


Fig. 5 - Radiant Intensity vs. Forward Current

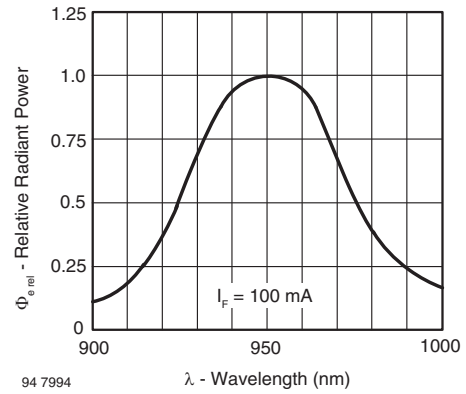


Fig. 8 - Relative Radiant Power vs. Wavelength

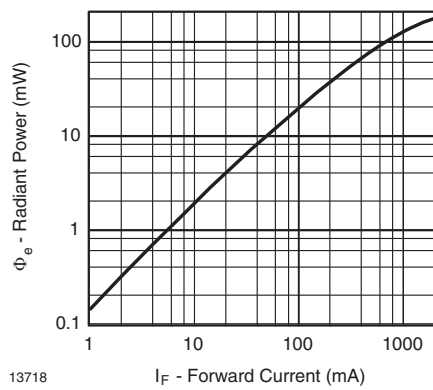


Fig. 6 - Radiant Power vs. Forward Current

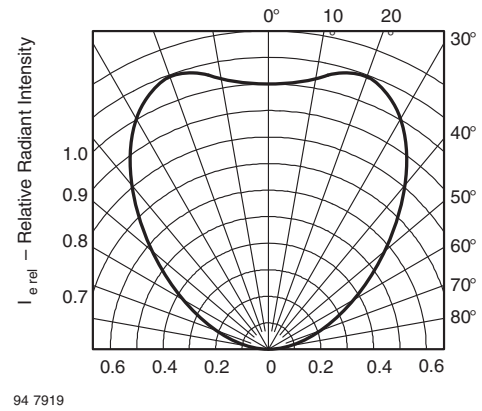


Fig. 9 - Relative Radiant Intensity vs. Angular Displacement

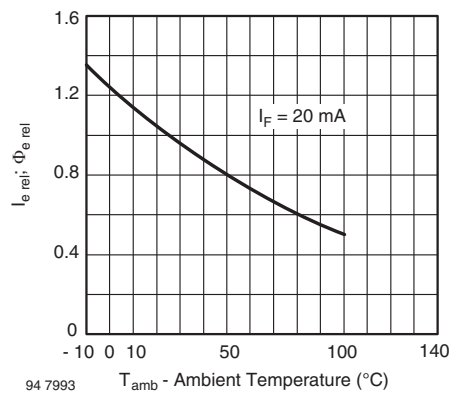
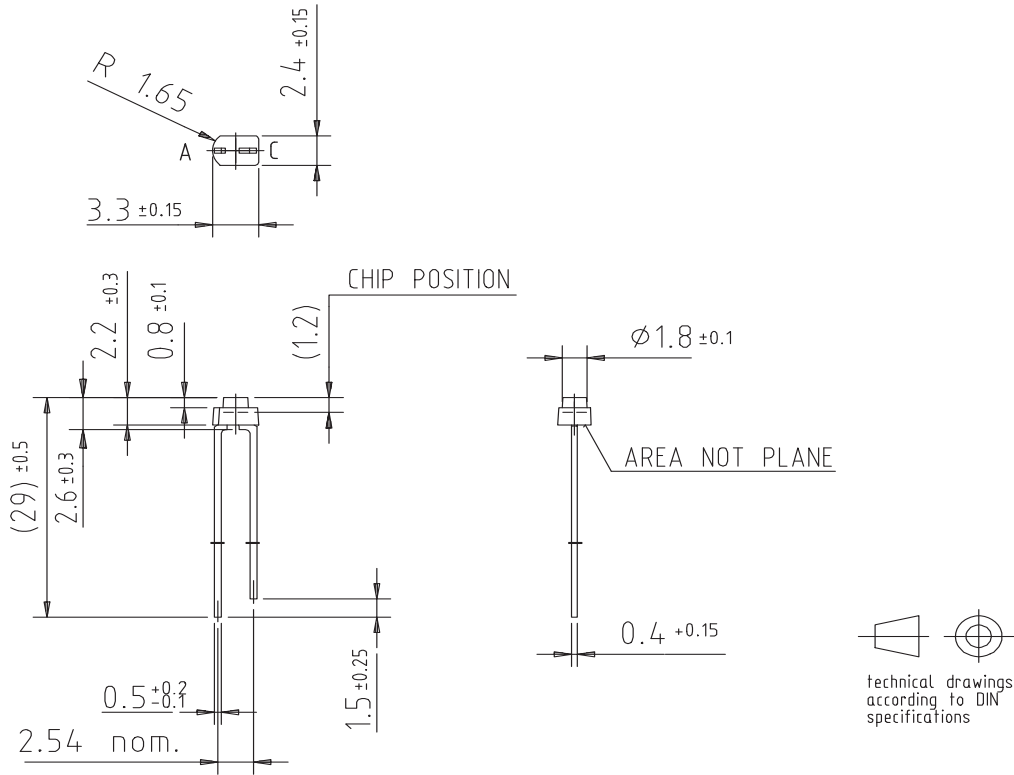


Fig. 7 - Relative Radiant Intensity/Power vs. Ambient Temperature

PACKAGE DIMENSIONS in millimeters



Drawing-No.: 6.544-5053.01-4

Issue: 1; 01.07.96

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