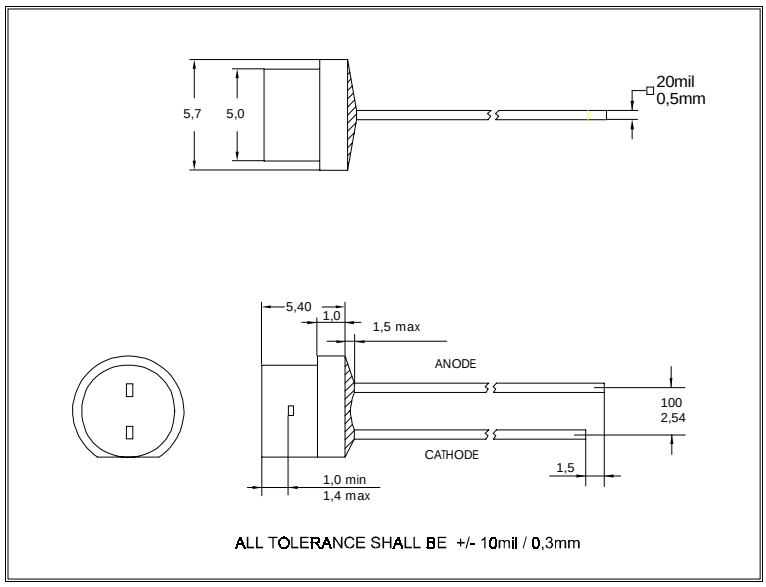
UNDER DEVELOPMENT
Preliminary Product Information
January 2001

Infrared Light Emitting Diode IRED 870nm/20ns FQR5580



Features

* Standard design LED for general purpose
  Based on double hetero structure of GaAlAs

* Low current and low degradation applications

* Edged Corner Contact ; free top surface

* Water-clear package style without stand-off

* Application : Open-Air communication / IrDa
  Lensed Optical Systems
  Medical instruments
  Encoder
  Optical Measurement Systems

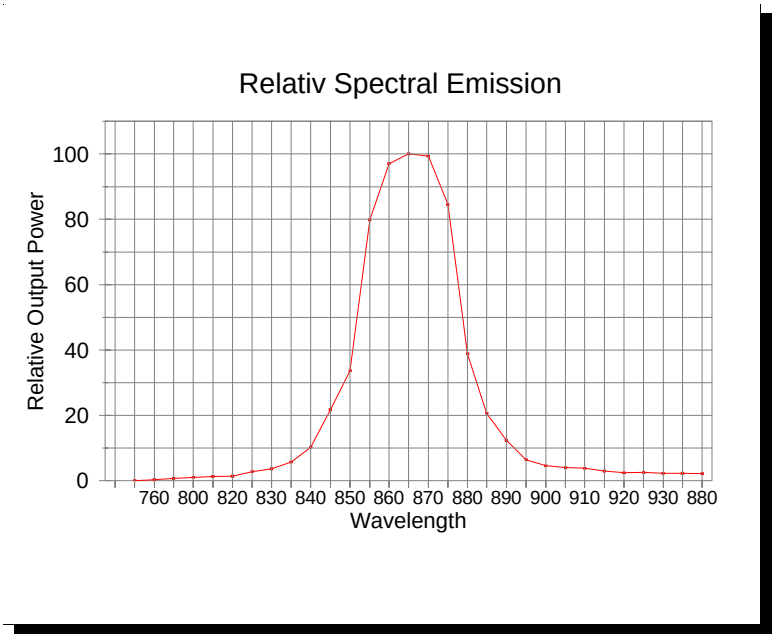
Electrical and optical characteristics and absolute maximum ratings (Ta=25°C unless otherwise noted)

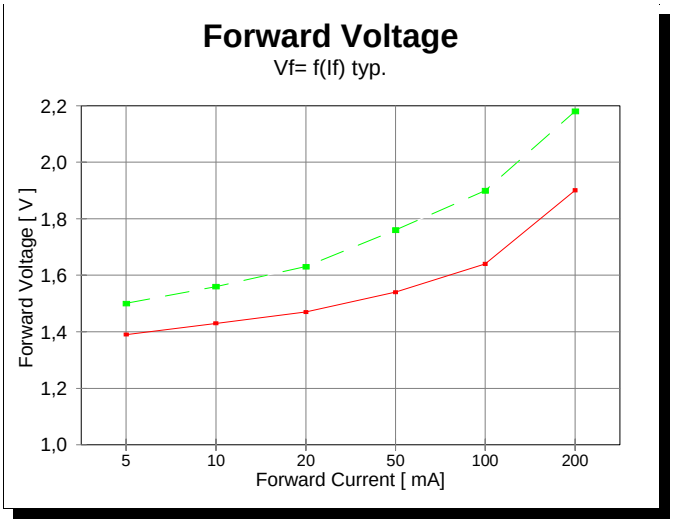
Symbol	Parameter	MIN	Typ	MAX	Unit	Test conditions
I_F	DC Forward current			100	mA	
I_{PEAK}	Peak Forward current			1500	mA	Tp< 10µsec. ; T=1:1 Rtherm < 100 K/W
V_F	Forward Voltage	1,3	1,5	2,1	V	IF = 50mA
V_R	Reverse Voltage	5			V	Irev = 100µA
λ_{Peak}	Peak Wavelength	860	870	885	nm	IF = 50mA
$\Delta\lambda_{0,5}$	Bandwidth of half power	25	30		nm	IF = 50mA
t_f	Fall time		25		ns	IF = 100mA
t_r	Rise time		25		ns	IF = 100mA
F_E	Total Power Output	32	38		mW	IF = 100mA
I_E	Radiant Intensity		36		mW/sr	IF = 100mA
D	Diameter of light emitting point		TDB		mm	IF = 20mA, 63% of radiant output (IEC825)
A	Chip size		0,13		mm²	Chip size : 360µmX360µm
d_c	Diameter of free emitting array		140		µm	from chip up to contact ring =70µm
$2\Phi_{0,5}$	Emission Angle		110		deg.	FE = 50%
TK_{VF}	Temp.Coeff. of Forward Voltage		- 2		mV/K	
TK_F	Temp.Coeff. of Radiant Power		- 0,4		%/K	
$T_{Operating}$	Operating Temperature	- 25		85	°C	
$T_{Storage}$	Storage Temperature	- 25		85	°C	
$T_{Soldering}$	Soldering Temperature			260	°C	2mm from case @5 sec.
$\Theta_{j\text{-}PIN}$	Thermal Resistance		450		K/W	
P_{tot}	Total Power Dissipation			230	mW	derate above 45°C 2,5mW/K

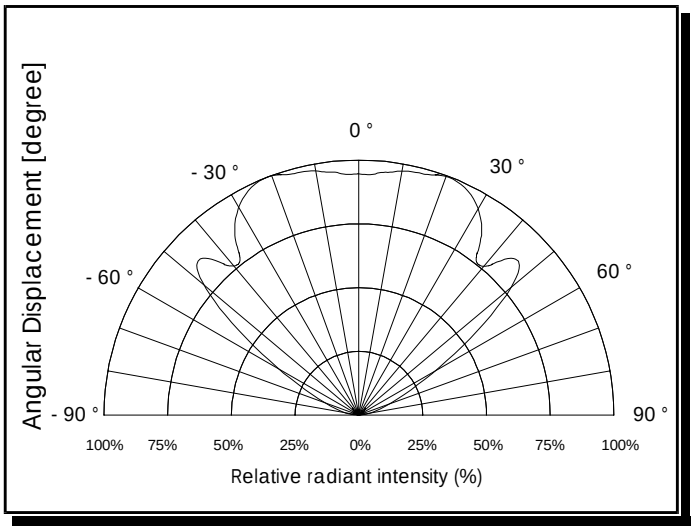
Order Informations :

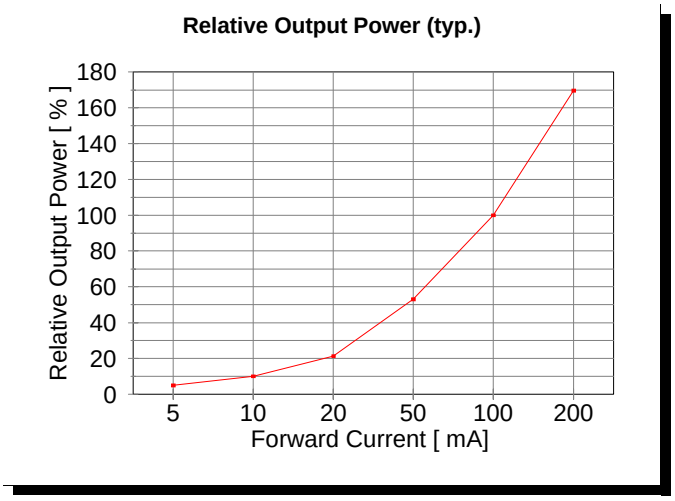
FQR5580	Bulk
FQR5580TR	Taped on Reel / 1000 pcs. standard reel
FQR5580TA	Taped in AMMOPACK /2000 pcs.

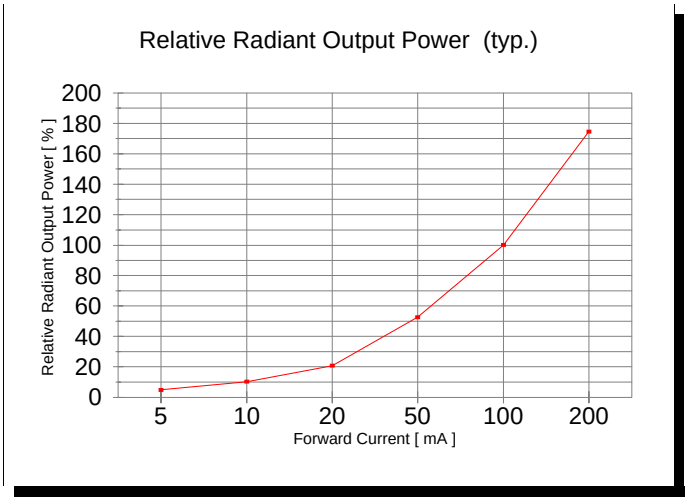
Infrared Light Emitting Diode IRED 870nm/20ns FQR5580











FIETJE SENSOR - & OPTOELEKTRONIK GMBH TELEPHON : +49 38203 65633 FAX : +49 38203 17890 E-MAIL : FIETJE@T-ONLINE.DE
WWW.FIETJE-WEB.DE