

Peak Emission Wavelength: 1020nm

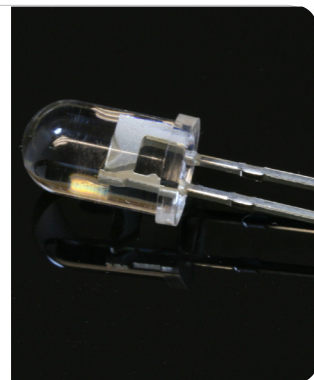
The MT51020-IR is an infrared T 1 3/4, 5mm water clear LED designed for applications requiring high power and high speed packaged with the lens optimized to produce a narrow viewing angle.

FEATURES

- > High Power Output
- > High Speed
- > Straight Leads

APPLICATIONS

- > Optical Communications
- > Safety Equipment / Automation
- > Coin / Currency Validation



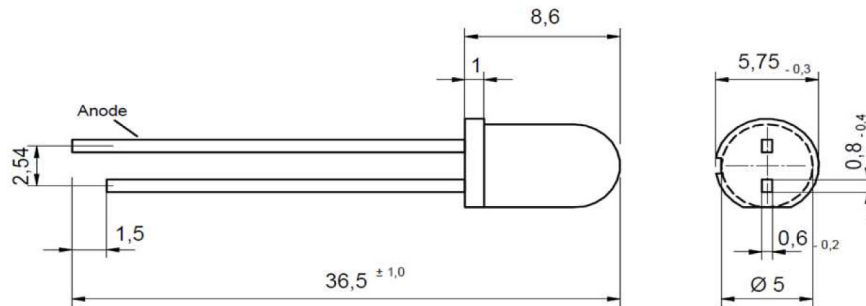
Absolute Maximum Ratings (Ta=25°C)

ITEMS	SYMBOL	RATINGS	UNIT
Forward Current	IF	100	mA
Peak Forward Current*1	IFP	200	mA
Power Dissipation	PD	135	mW
Operating Temperature Range	Topr	-20 ~ +80	°C
Storage Temperature Range	Tstg	-55 ~ +100	°C
Lead Soldering Temperature*2	Tls	260	°C

*1: Test Conditions: $t_p \leq 50\mu s$, $t_p/T = 1/2$. *2: Time 5 Sec max, Position: Up to 3mm from case.

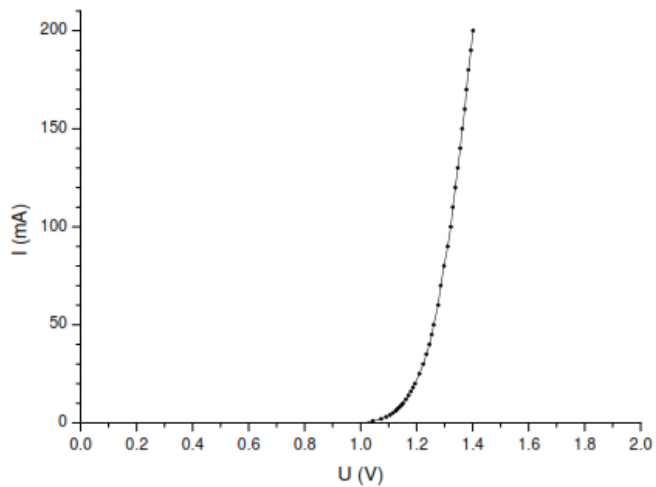
Electrical & Optical Characteristics (Ta = 25°C)

ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage	VF	IF=20mA	--	1.15	1.40	V
Forward Voltage	VF	IF=100mA	--	1.25	1.35	V
Reverse Voltage	VR	IR=10μA	5	--	--	V
Radiant Power	Φe	IF=20mA	--	4	--	mW
Radiant Power	Φe	IF=100mA	--	20	--	mW
Radiant Intensity	Ie	IF=20mA	--	13	--	mW/sr
Radiant Intensity	Ie	IF=100mA	--	65	--	mW/sr
Peak Emission Wavelength	λp	IF=100mA	1000	1020	1040	nm
Spectral Bandwidth at 50%	Δλ _{0.5}	IF=100mA	--	50	--	nm
Viewing Angle	Θ	IF=100mA	--	20	--	deg.
Switching Time	T _R , T _F	IF=100mA	--	20; 40	--	ns

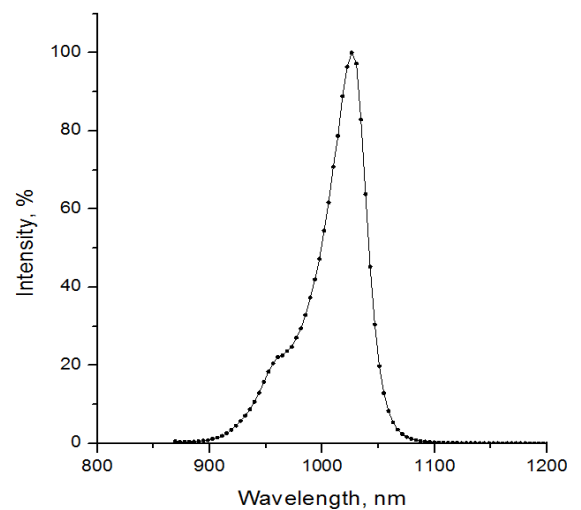


Unit: mm

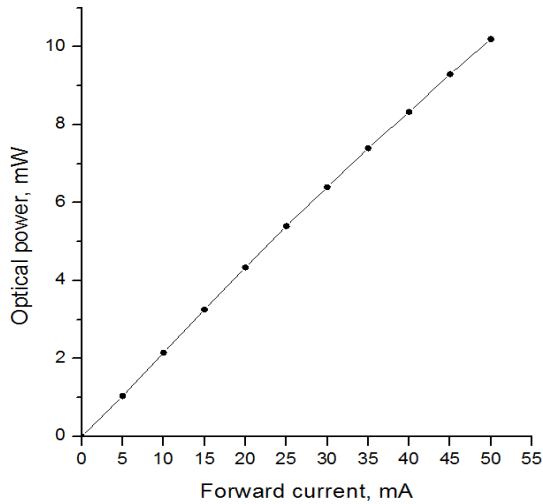
Forward current vs. voltage



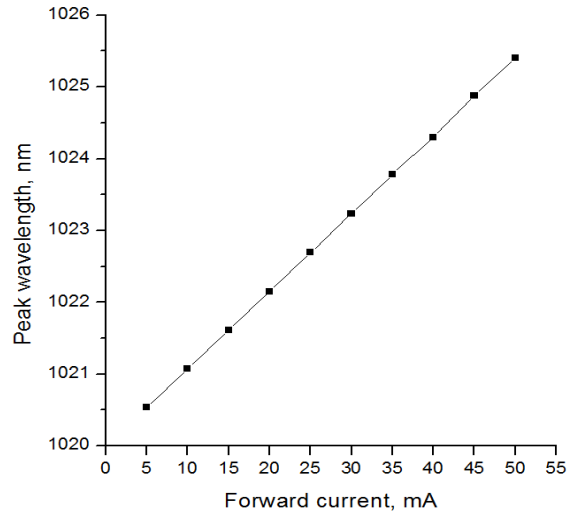
Typical spectrum at 50 mA



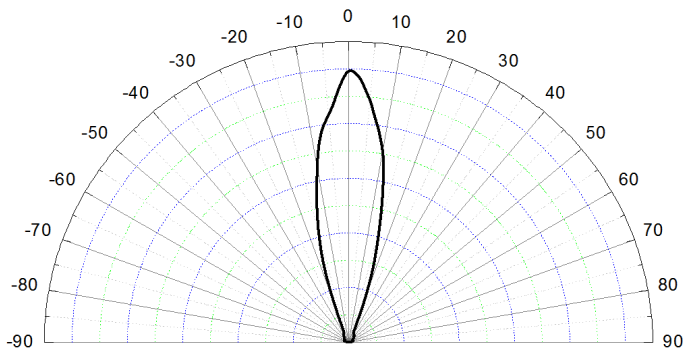
Optical power vs. forward current



Peak wavelength vs. forward current



Typical radiation pattern



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