Black Plastic Photodiode

LTR-516AB/LTR-526AB/LTR-536AB/LTR-546AB

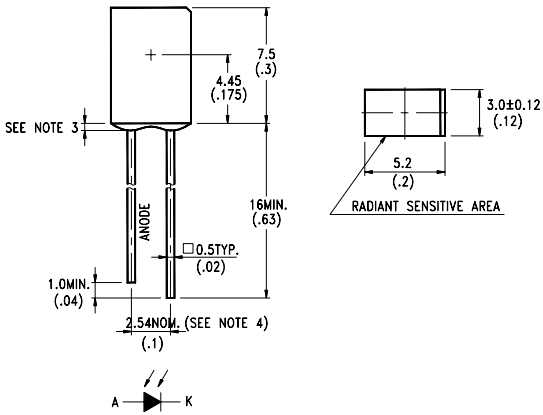
Features

- High photo sensitivity.
- Suitable for infrared radiation.
- Low junction capacitance.
- High cut-off frequency.
- Fast switching time.

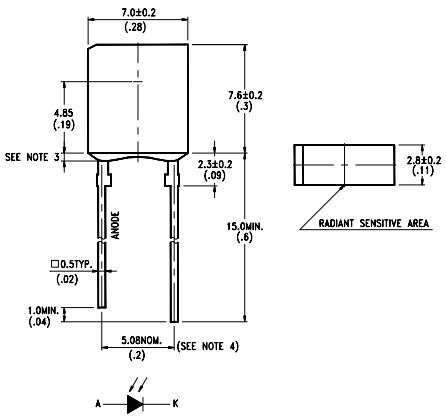
Description

The LTR-516AB/LTR-526AB/LTR-536AB/LTR-546AB are special dark plastic package that cut the visible light and suitable for the detectors of infrared applications. This series is spectrally matched to the LTE-3677/LTE-3376 of infrared emitting diodes.

LTR-536AB

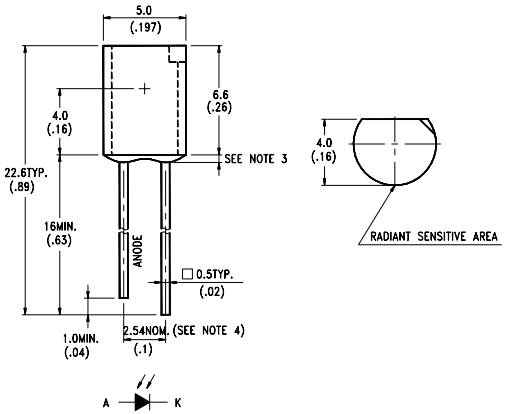


LTR-546AB

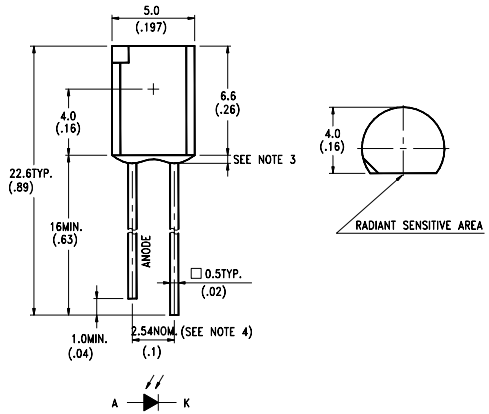


Package Dimensions

LTR-516AB



LTR-526AB



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25mm (.010") unless otherwise noted.
3. Protruded resin under flange is 1.5mm (.059") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.

INFRARED PRODUCTS

Absolute Maximum Ratings at Ta=25℃

Parameter	Maximum Rating	Unit
Power Dissipation	150	mW
Reverse Break Down Voltage	30	V
Operating Temperature Range	-40℃ to +85℃	
Storage Temperature Range	-55℃ to +100℃	
Lead Soldering Temperature [1.6mm (.063 in.) from body]	260℃ for 5 Seconds	

Electrical Optical Characteristics at Ta=25℃

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Reverse Break Down Voltage	$V_{(BR)R}$	30			V	I_R=100 μA Ee=0mW/cm²
Reverse Dark Current	$I_{D(R)}$			30	nA	V_R=10V Ee=0mW/cm²
Open Circuit Voltage	V_{OC}		350		mV	λ =940nm Ee=0.5mW/cm²
Rise Time	Tr		50		nsec	V_R=10V λ =940nm R_L=1KΩ
Fall Time	Tf		50		nsec	
Light Current	I_S	1.7	2		μA	V_R=5V λ =940nm Ee=0.1mW/cm²
Total Capacitance	C_T		25		pF	R=3V V_F=1MHZ Ee=0mW/cm²
Wavelength of the Max Sensitivity	λ SMAX		900		nm	

Typical Electrical/Optical Characteristic Curves (25℃ Ambient Temperature Unless Otherwise Noted)

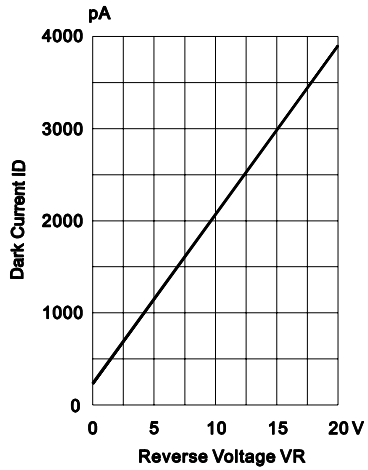


Fig.1 DARK CURRENT VS. REVERSE VOLTAGE TA=25 XC, Ee=0 mW/cm²

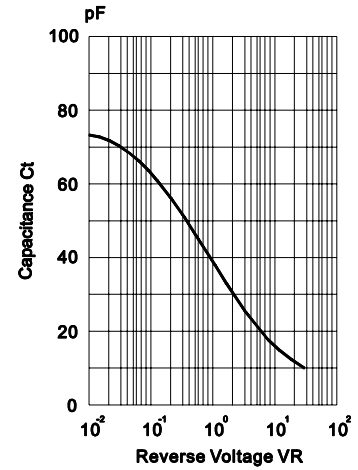


Fig.2 CAPACITANCE VS. REVERSE VOLTAGE F=1MHZ; Ee=0mW/cm²

Typical Electrical/Optical Characteristic Curves
(25℃ Ambient Temperature Unless Otherwise Noted)

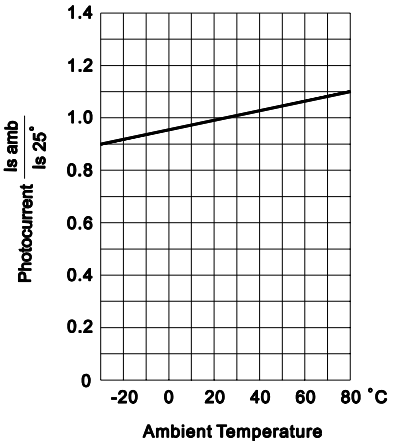


Fig.3 PHOTOCURRENT VS. AMBIENT TEMPERATURE

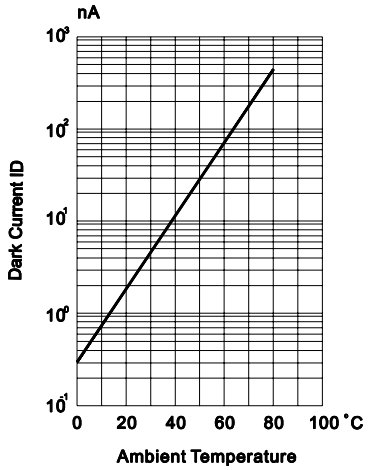


Fig.4 DARK CURRENT AMBIENT TEMPERATURE VR=10, Ee=0mW/cm²

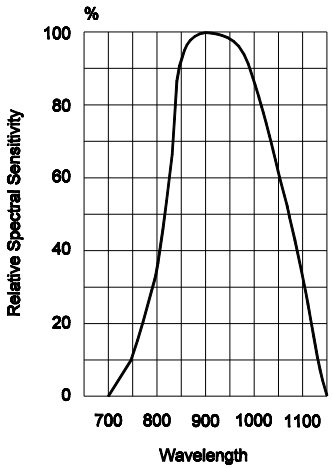


Fig.5 RELATIVE SPECTRAL SENSITIVITY VS WAVELENGTH

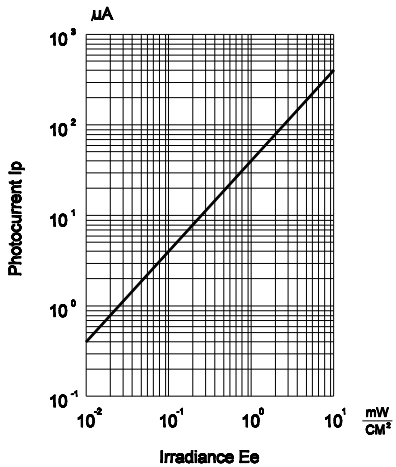


Fig.6 PHOTOCURRENT VS IRRADIANCE λ= 940 nm

Typical Electrical/Optical Characteristic Curves
(25℃ Ambient Temperature Unless Otherwise Noted)

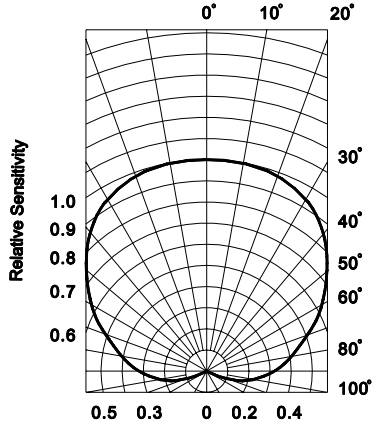


Fig.7 SENSITIVITY DIAGRAM

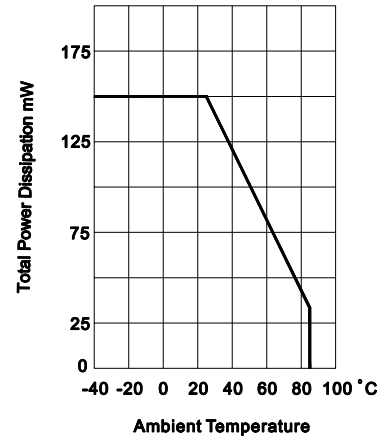


Fig.8 TOTAL POWER DISSIPATION VS AMBIENT TEMPERATURE