



IR Emitter and Detector **Product Data Sheet**

LTR-516AB

Spec No.: DS-50-93-0020

Effective Date: 07/24/2012

Revision: C

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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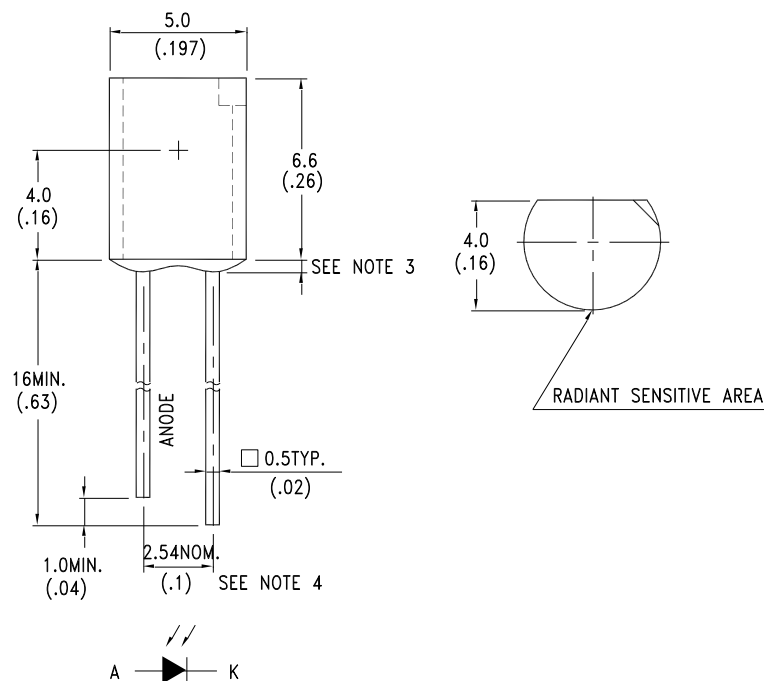
FEATURES

- * HIGH PHOTO SENSITIVITY
- * SUITABLE FOR INFRARED RADIATION
- * LOW JUNCTION CAPACITANCE
- * HIGH CUT-OFF FREQUENCY
- * FAST SWITCHING TIME
- * THE LTR-516AB IS A SPECIAL DARK BLUE PLASTIC PACKAGE THAT CUT THE VISIBLE LIGHT AND SUITABLE FOR THE DETECTORS OF INFRARED APPLICATIONS



REV.C JUL 2012

PACKAGE DIMENSIONS



NOTES:

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



LITE-ON TECHNOLOGY CORPORATION

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ABSOLUTE MAXIMUM RATINGS AT TA=25°C

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation	150	mW
Reverse Voltage	30	V
Operating Temperature Range	-40°C to + 85°C	
Storage Temperature Range	-55°C to + 100°C	
Lead Soldering Temperature [1.6mm(.063") From Body]	260°C for 5 Seconds	

ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Reverse Break Down Voltage	V _(BR) R	30			V	I _R = 100 μ A E _e = 0mW/cm ²
Reverse Dark Current Voltage	ID(R)			30	nA	V _R = 10V E _e = 0mW/cm ²
Open Circuit Voltage	V _{OC}		350		mV	λ = 940nm E _e = 0.5mW/cm ²
Rise Time	Tr		50		nsec	V _R = 10V λ = 940nm R _L = 1K Ω
Fall Time	Tf		50		nsec	
Short Circuit Current	I _S	1.7	2		μ A	V _R = 5V λ = 940nm E _e = 0.1mW/cm ²
Total Capacitance	C _T		25		P	V _R = 3V f = 1MHZ E _e = 0mW/cm ²
Wavelength of the Max Sensitivity	λ SMAX		900		nm	

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

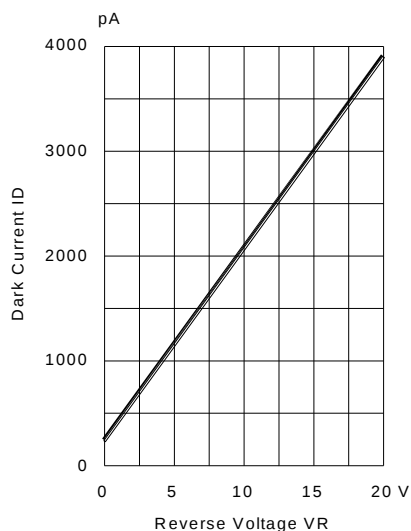


Fig.1 DARK CURRENT VS. REVERSE VOLTAGE
TA=25°C, Ee=0 mW/cm²

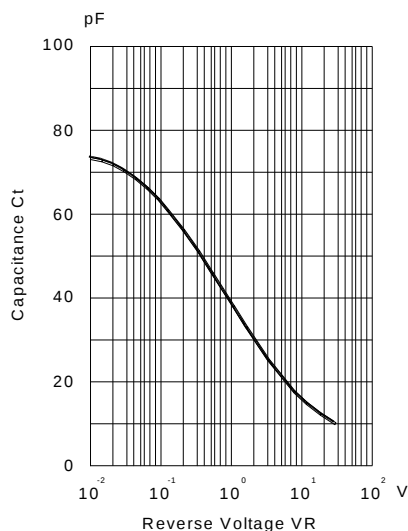


Fig.2 CAPACITANCE VS. REVERSE VOLTAGE
F=1MHz; Ee=0mW/cm²

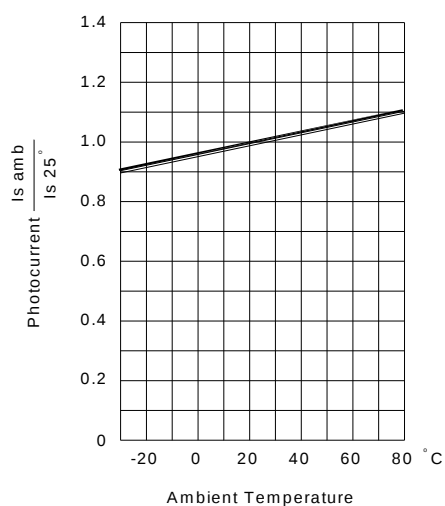


Fig.3 PHOTOCURRENT VS. AMBIENT TEMPERATURE

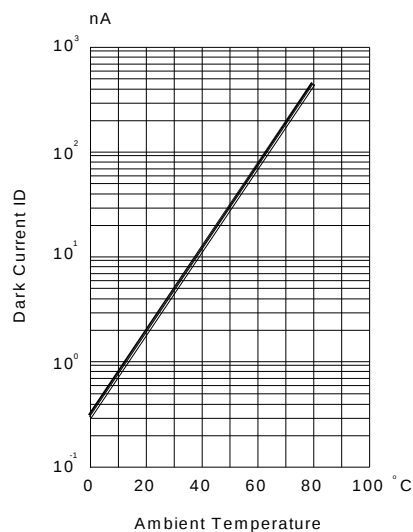


Fig.4 DARK CURRENT VS. AMBIENT TEMPERATURE
VR=10, Ee=0mW/cm²

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

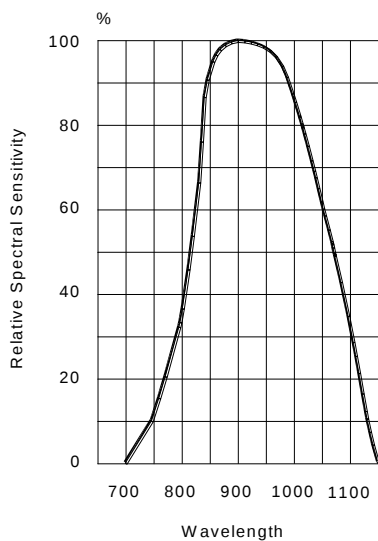


Fig.5 RELATIVE SPECTRAL SENSITIVITY VS WAVELENGTH

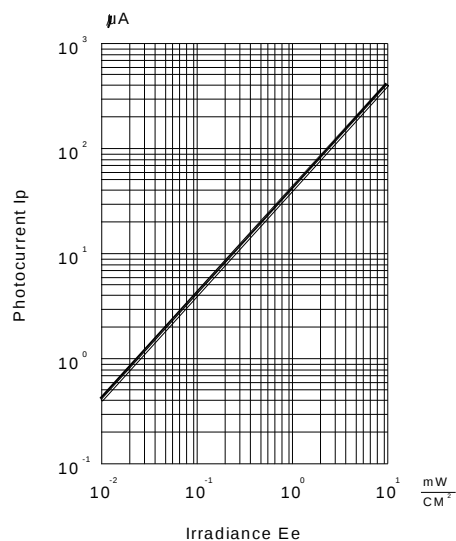


Fig.6 PHOTOCURRENT VS IRRADIANCE $\lambda = 940 \text{ nm}$

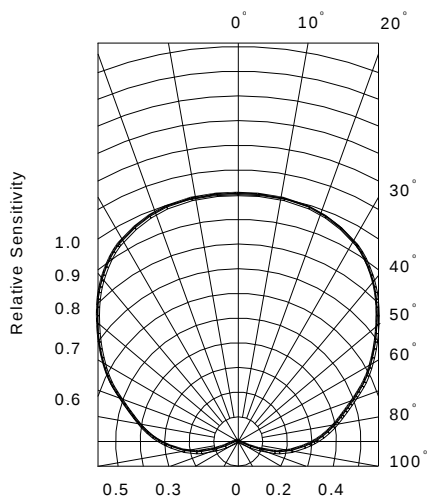


Fig.7 SENSITIVITY DIAGRAM

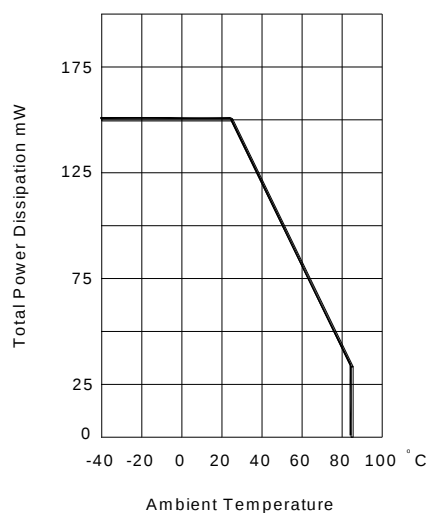


Fig.8 TOTAL POWER DISSIPATION VS AMBIENT TEMPERATURE