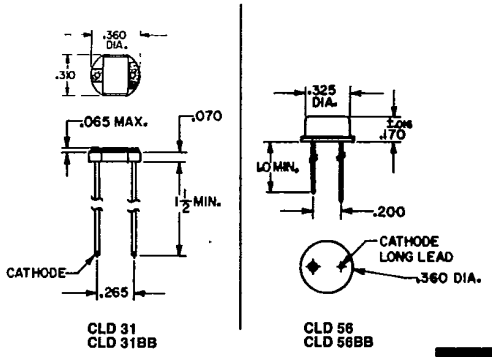
Product Data

CLD31
CLD56
CLD31BB
CLD56BB

Silicon Planar Photovoltiac Diodes



CLD 31
CLD 31BB

CLD 56
CLD 56BB

The anode of "V" versions are identified by a color dot

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GENERAL DESCRIPTION — The CLD Series of Photodiodes is specifically designed to optimize Photovoltaic characteristics. They are all Silicon PN Planar diodes, with 2 diodes in hermetic bases for stringent environmental applications and 2 epoxy encapsulated devices for lower cost applications. All diodes offer high linearity, low dark current, and fast response for use in critical measurement applications. These units are also available with a special filter material to block out response to visible light; CLD31V.

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures

Storage Temperature −35°C to +150°C
Operating Junction Temperature +150°C
Storage, Operating Temperature of Epoxy Encapsulated Device −30°C to +85°C (5)

All dimensions ±.005 except as noted.

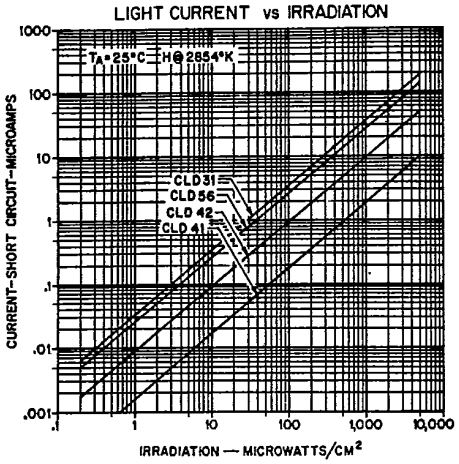
ELECTRICAL CHARACTERISTICS (25°C Free Air unless otherwise designated.)

Symbol	Characteristics	CLD31 Min.	CLD31 Max.	CLD31BB Min.	CLD31BB Max.	CLD56 Min.	CLD56 Max.	CLD56BB Min.	CLD56BB Max.	Unit
LXW	Active Area	.222 x .122		.222 x .122		.222 x .122		.222 x .122		inches
I_{SC}	Short Circuit Current (1) H = 5mw/cm²	150		150		100		100		μA
V_{OC}	Open Circuit Voltage (1) H = 5mw/cm²	.35 Typ.		.35 Typ.		.35 Typ.		.35 Typ.		Volts
I_D	Dark Current V = 100 mv H = 0 V = −15 v		100 —		— 50		100 —		— 50	nA
C_J	Junction Capacitance (2)		400		400		400		400	pf
tr, tf	Rise or Fall time (3)		10		10		10		10	μsec
ΔT_{SC}	Temperature Coefficient I_{SC} (1) (4)	+.2% Typical								%/C°
	Peak Spectral Response	8600 Typ.		8600 Typ.		8600 Typ.		8600 Typ.		°A

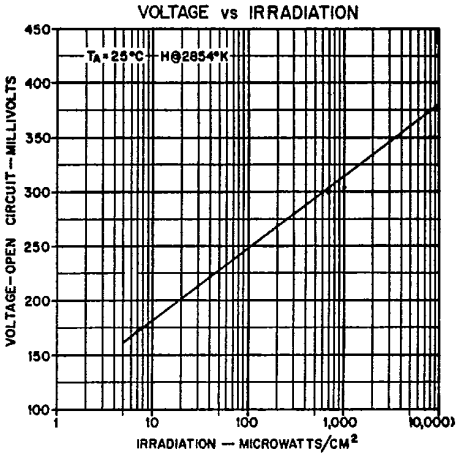
(1) Light source is a frosted tungsten incandescent lamp at 2854°K.
(2) Measured at 0 bias with f = 1MHZ.
(3) Measured in an unsaturated condition with an IR source and a load resistor of 1Kohms.
(4) Typical open circuit voltage temperature coefficient is −2mV/°C.
(5) Can supply units rated for 100 C

Consult factory for special I_D selections

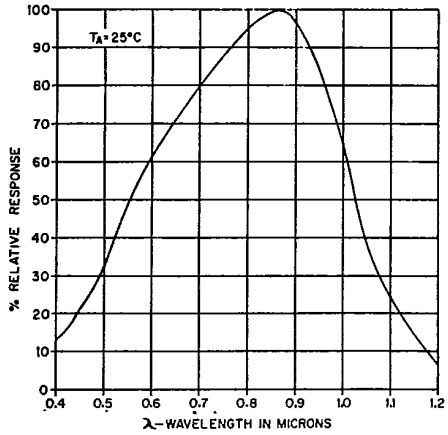
LIGHT CURRENT vs IRRADIATION



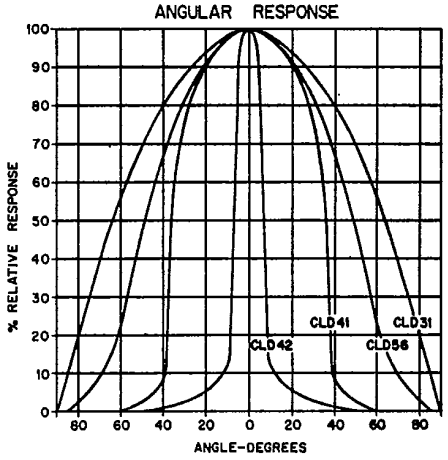
VOLTAGE vs IRRADIATION



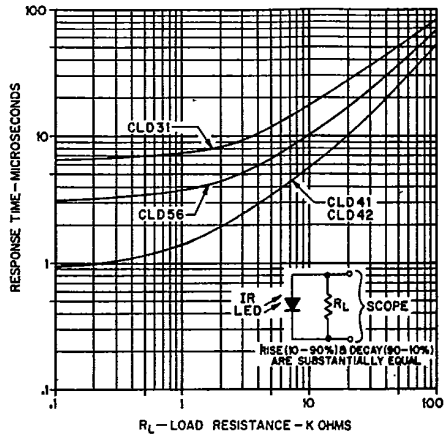
SPECTRAL RESPONSE



ANGULAR RESPONSE



RESPONSE TIME-UNSATURATED



PHOTOVOLTAIC DIODE EQUIVALENT CIRCUIT