

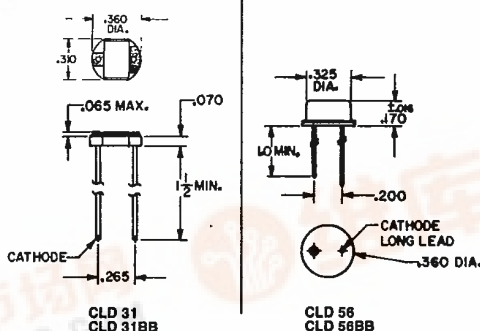
CLAIREX ELECTRONICS DIV

19E D 2142799 0000743 5

T-41-51

Product Data

CLD31
CLD56
CLD31BB
CLD56BB

Silicon Planar
Photovoltaic Diodes

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

4

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 $+150^{\circ}\text{C}$
Operating Junction Temperature $+150^{\circ}\text{C}$
Storage, Operating Temperature of Epoxy
Encapsulated Device -30°C to $+85^{\circ}\text{C}$ (5)

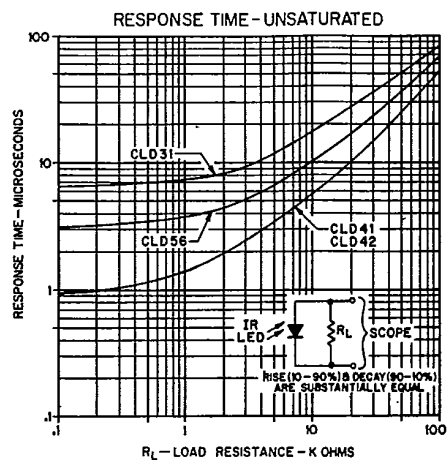
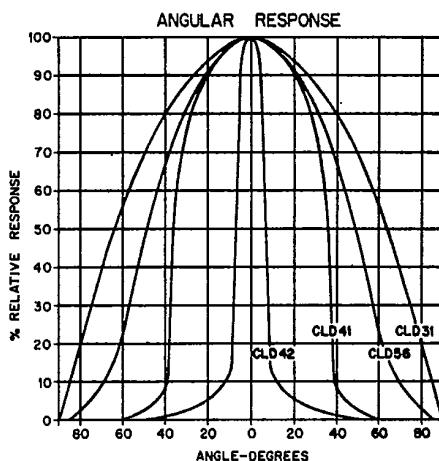
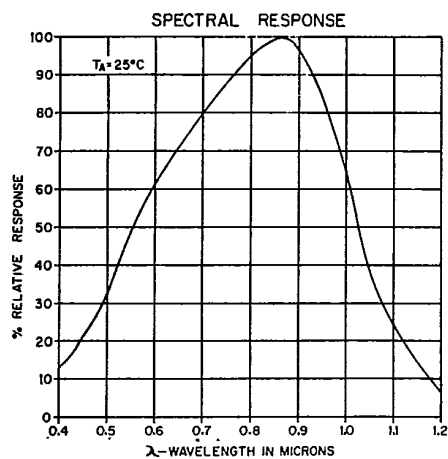
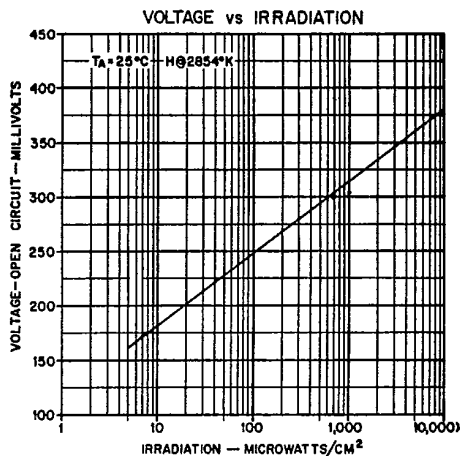
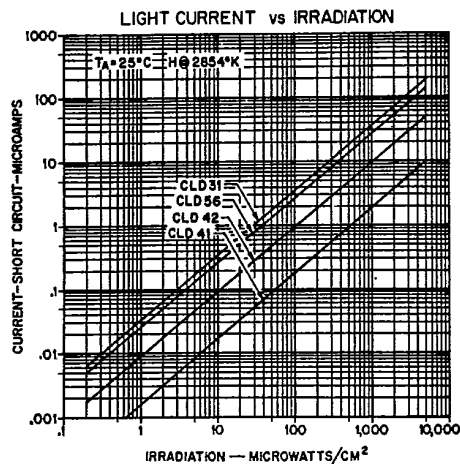
All dimensions $\pm .005$ except as noted.**ELECTRICAL CHARACTERISTICS (25°C Free Air unless otherwise designated.)**

Symbol	Characteristics	CLD31 Min. Max.	CLD31BB Min. Max.	CLD56 Min. Max.	CLD56BB Min. 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/cm ²	150	150	100	100	μA
V _{oc}	Open Circuit Voltage (1) H = 5mw/cm ²	.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
t _r , t _f	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.	Å

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

Consult factory for special I_D selections

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PHOTOVOLTAIC DIODE EQUIVALENT CIRCUIT

