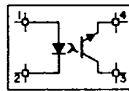
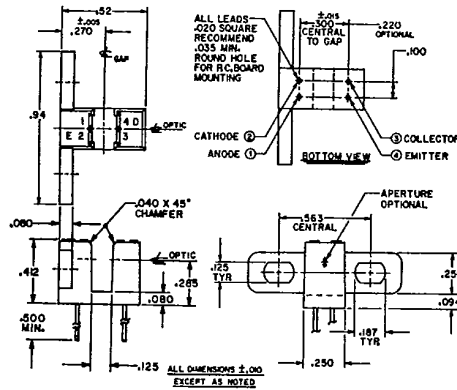


T-41-73

**CLI800W
CLI810W
CLI820W
CLI830W
CLI835W**

Optical Switches

GENERAL DESCRIPTION — This optical switch couples a gallium arsenide infrared emitting diode and a silicon phototransistor for a range of guaranteed minimum sensor currents. The CLI835W has a .010" aperture over the sensor for precise position detector applications. The unique mechanical configuration facilitates convenient mounting of the units to a vertical surface.



ABSOLUTE MAXIMUM RATINGS

Maximum Temperature:
Storage - 55°C to + 150°C
Operating Jct. Temperature + 100°C

EMITTER (GaAs Diode)

Power Dissipation:
At 25°C Amb., Pd= 100mw, derate 1.33mw/°C
Maximum Voltage:
V_R Reverse Voltage= 4.0 volts
Maximum Current:
I_F D.C. Forward Current= 60ma cont.
Note: 1 .005 inch optional

DETECTOR

Power Dissipation:
At 25°C amb., Pd= 150mw, derate 2.0mw/°C
Maximum Voltages:
V_{CEO}= 30V, V_{ECO}= 5V
Maximum Current:
I_C, Collector Current 100ma pulsed



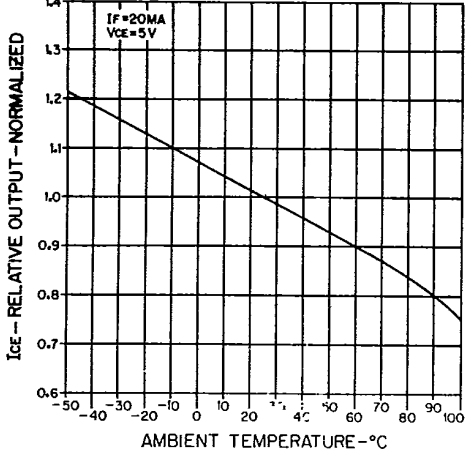
ELECTRICAL CHARACTERISTICS 25°C Free Air

Symbol	Characteristics	Test Conditions	CLI-800W Min. Max.	CLI-810W Min. Max.	CLI-820W Min. Max.	CLI-830W Min. Max.	CLI-835W Min. Max.	Units
EMITTER	V _R Reverse Voltage	I _R =10µa	4.0	4.0	4.0	4.0	4.0	volts
	V _F Forward Voltage	I _F =16ma	1.5	1.5	1.5	1.5	1.5	volts
SENSOR	BV _{CEO} Collector to Emitter Breakdown Voltage	I _C =100µa	30	30	30	30	30	volts
	I _D Leakage Current	V _{CE} =10V	100	100	100	100	100	na
	C _{CE} Capacitance	V _{CE} =5V f=1MHZ	5	5	5	5	5	pf
COUPLED	I _{CE} Sensor Current	I _F =5ma, V _{CE} =5V I _F =20ma, V _{CE} =5V	0.4	.2 Typ. 1.0	.5 Typ. 2.0	1.0 Typ. 4.0	0.4	ma ma
	V _{CE(SAT)} Collector to Emitter Saturation Voltage	I _F =30ma, I _C =.25ma	0.4	0.4	0.4	0.4	0.4	volts volts
T _R , T _F	Rise, Fall Time	I _C =2ma, V _{CC} =5V R _L =100 ohms	5 Typ.	5 Typ.	5 Typ.	5 Typ.	5 Typ.	µsec

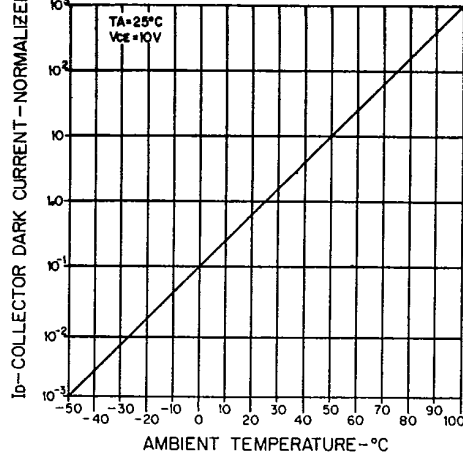
Special electrical or mechanical characteristics always available - Consult factory

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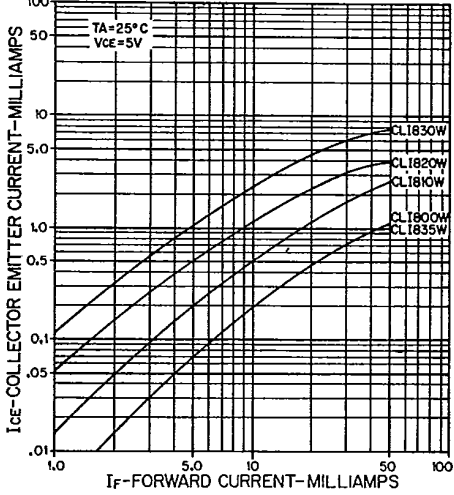
COLLECTOR EMITTER CURRENT Vs TEMPERATURE



COLLECTOR DARK CURRENT Vs TEMPERATURE



COLLECTOR CURRENT Vs IRED CURRENT



OUTPUT CURRENT Vs SHIELD DISTANCE

