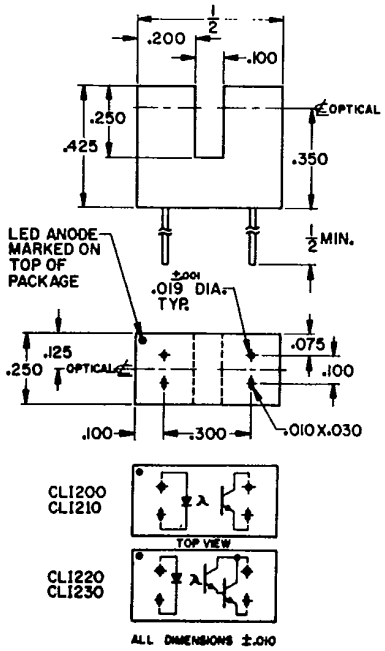
T-41-73

CLI200
CLI210
CLI220
CLI230

Optical Switches



GENERAL DESCRIPTIONS — This Series of optical switches provides a small rugged unit capable of circuit board mounting. The units feature a Valox® housing and are epoxy backfilled. The optical switches feature both hermetically sealed, glass lensed IREDs and either a phototransistor or a darlington phototransistor sensor for maximum reliability. The CLI200 and CLI210 have phototransistor outputs providing excellent sensor current levels along with fast switching speeds. The CLI220 and CLI230 have darlington phototransistor outputs providing very high sensor current levels. The CLI210 and CLI230 have a .005" slit over the sensor aperture for additional target resolution.

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= 3.0 volts
Maximum Current:
I_F D.C. Forward Current= 60ma cont.

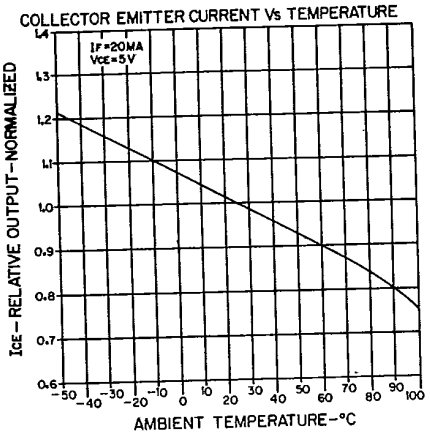
DETECTOR
Power Dissipation:
At 25°C amb., Pd=50mw, derate 0.5mw/°C
Maximum Voltages:
V_{CEO} 40V, V_{ECO} =5V
Maximum Current:
I_C, Collector Current 200ma pulsed

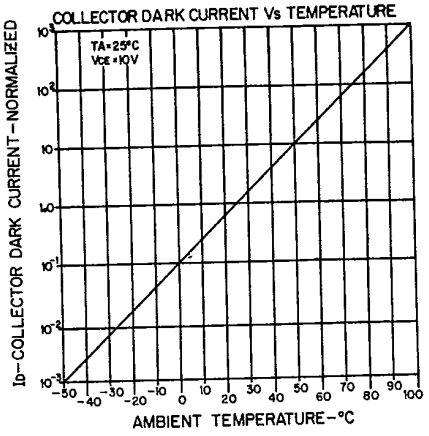
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ELECTRICAL CHARACTERISTICS 25°C Free Air

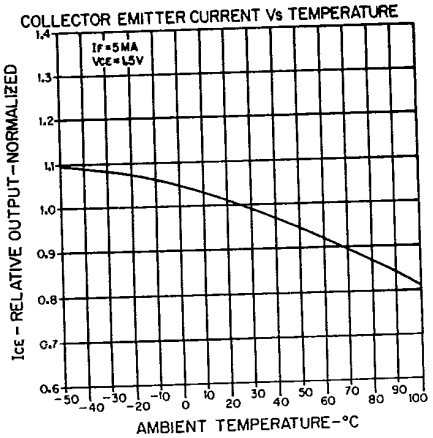
Symbol	Characteristics	Test Conditions	CLI200 Min.	CLI200 Max.	CLI210 Min.	CLI210 Max.	CLI220 Min.	CLI220 Max.	CLI230 Min.	CLI230 Max.	Units
IRED											
V_R	Reverse Voltage	I_R=10 μa	3		3		3		3		volts
V_F	Forward Voltage	I_F=16 ma		1.5		1.5		1.5		1.5	volts
SENSOR											
BV_{CEO}	Collector to Emitter Breakdown Voltage	I_C=100 μa	40		40		40		40		volts
I_D	Leakage Current	V_{CE}=10V, I_F=0		50		50		100		100	na
COUPLED	Sensor Current	I_F=20ma, V_{CE}=5V	1.0		.10		10		2		ma
I_{CE}	Collector to Emitter	I_F=20ma, I_C .05ma				.5					volts
$V_{CE(SAT)}$	Saturation Voltage	I_F=20ma, I_C = .5ma		.5							volts
		I_F=20ma, I_C=1ma						1.2		1.2	
T_R, T_F	Rise, Fall Time	I_C=2ma, V_{CC}=5V R_L=100 ohms	5 TYP		5 TYP		150 TYP		150 TYP		μsec
T_R, T_F	Rise, Fall Time	I_C=2ma, V_{CC}=5V R_L=1000 ohms	15 TYP		15 TYP						μsec

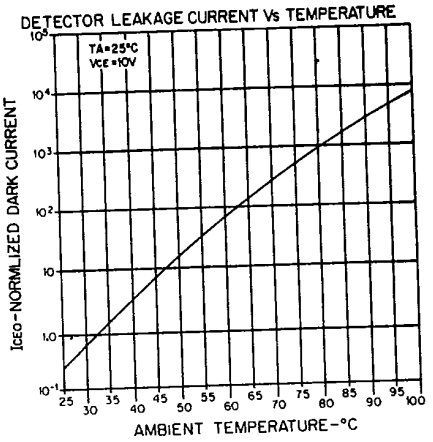
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CLI200 CLI210





CLI220 CLI230

