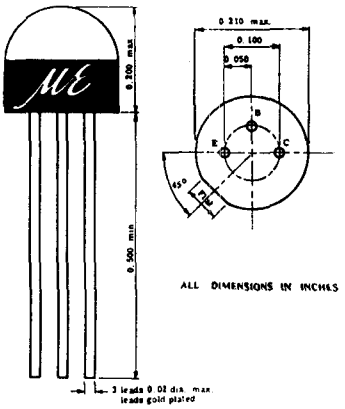
MEL 11
MEL 12

NPN SILICON PHOTO-DARLINGTON TRANSISTOR

GENERAL DESCRIPTION :

The MEL 11, MEL 12 are three terminal NPN silicon planar photo-darlington transistors. It features very high light current and low dark current.

MECHANICAL OUTLINE
TO-106



ABSOLUTE MAXIMUM RATINGS :

		MEL 11	MEL 12
Continuous Power Dissipation	P_d	200mW	
Collector Current	I_C	150mA	
Collector-Emitter Voltage	V_{CEO}	30V	40V
Collector-Base Voltage	V_{CBO}	40V	60V
Operating Temperature Range	T_j	−55° C to +85° C	
Storage Temperature Range	Tstg	−55° C to +100° C	

ELECTRICAL CHARACTERISTICS AT 25° C

CHARACTERISTICS	SYMBOL	MEL 11			MEL 12			UNIT	CONDITION
		Min.	Typ.	Max.	Min.	Typ.	Max.		
Collector-Emitter Breakdown Voltage	BV_{CEO}	30			40			V	I_C=10 mA H=0
Collector-Base Breakdown Voltage	BV_{CBO}	40			60			V	I_C=0.1mA H=0
Emitter-Base Breakdown Voltage	BV_{EBO}	10			10			V	I_E=0.1mA H=0
Light Current	I_L	0.5	2		1	3		mA	V_{CE}=5V H=2mW/cm^2
Dark Current	I_D			100			100	nA	V_{CE}=5V I_B=0
Delay Time	t_d		60			60		μsec	V_{CE}=10V I_L=1mA R=1KΩ
Rise Time	t_r		100			100		μsec	V_{CE}=10V I_L=1mA R=1KΩ
Storage Time	t_s		0.5			0.5		μsec	V_{CE}=10V I_L=1mA R=1KΩ
Fall Time	t_f		75			75		μsec	V_{CE}=10V I_L=1mA R=1KΩ