

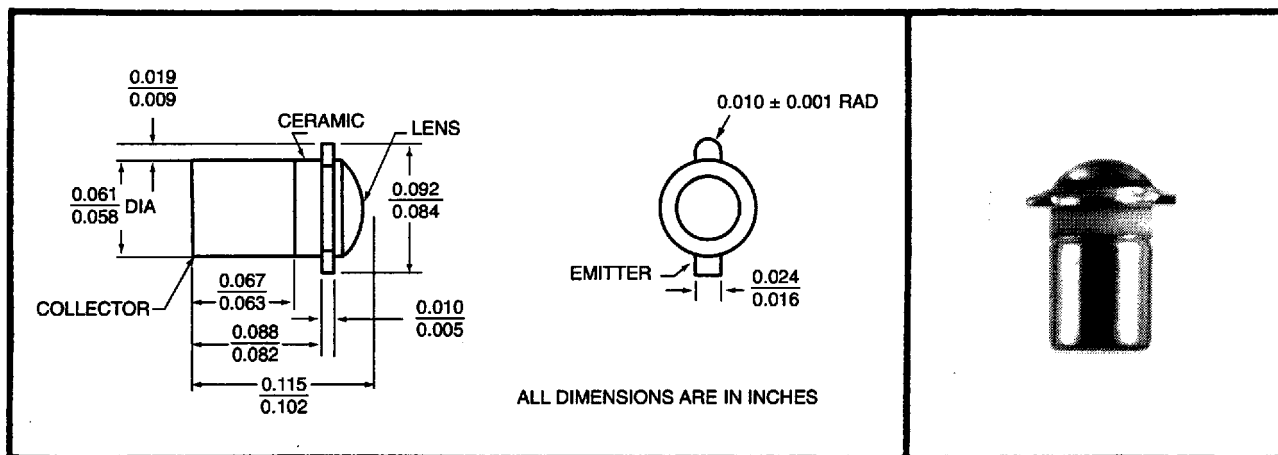
SILICON PHOTOTRANSISTOR "PILL PACK" 61055 (TYPE GS 1020)

GENERAL DESCRIPTION

MINIATURE LIGHT SENSOR FOR HIGH-DENSITY MOUNTING
GLASS/CERAMIC/KOVAR HERMETIC PACKAGED

Mii 61055 is an N-P-N Planar Silicon Transistor in a package designed to be mounted in a double-clad printed circuit board. It is available in a range of sensitivities and is lensed for minimum response to stray light. High sensitivity, low dark current leakage, and low saturation voltage make this device ideal for interfacing with TTL circuits. Available screened to MIL-S-19500.

PHYSICAL DESCRIPTION



OPTICAL/ELECTRICAL CHARACTERISTICS AT 25°C

PARAMETER	LIGHT CURRENT		DARK CURRENT	COLLECTOR BREAKDOWN	EMITTER BREAKDOWN	LIGHT CURRENT RISE TIME	SATURATION VOLTAGE	ANGULAR RESPONSE
TEST CONDITION	$V_{CE} = 5.0V$ * $H = 20 \text{ mW/cm}^2$		$V_{CE} = 30V$ $H = 0$	$I_C = 100 \mu A$	$I_E = 100 \mu A$	$R_L = 1000\Omega$ $V_{CC} = 5V$ $I_L = 1.0mA$	$I_C = 0.4 \text{ ma}$ H as shown	Note 1
SYMBOL	I_L		I_D	BV_{CEO}	BV_{ECO}	t_r	$V_{CE(sat)}$	θ
UNIT	mA		nA	VOLTS	VOLTS	$\mu \text{ sec}$	VOLTS	degrees
	MIN	MAX	MAX	MIN	MIN	TYP	TYP	TYP
GS 1020-1	5.0	3.0	25	50	7	2.0	0.3	24
GS 1020-2	2.0	5.0	25	50	7	3.0	0.3	24
GS 1020-3	4.0	8.0	25	50	7	5.0	0.3	24
GS 1020-4	7.0	-	25	50	7	7.0	0.3	24

* Irradiance in mW/cm^2 from a tungsten source at a color temperature of 2870K

1 The angle between incidence for peak response and incidence for 50% of peak response

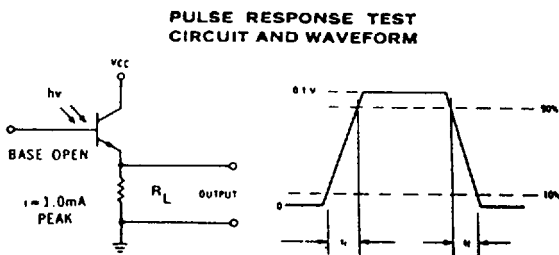
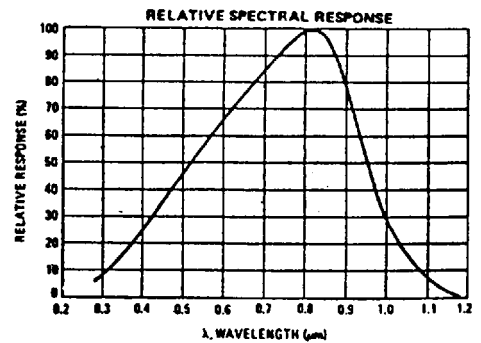
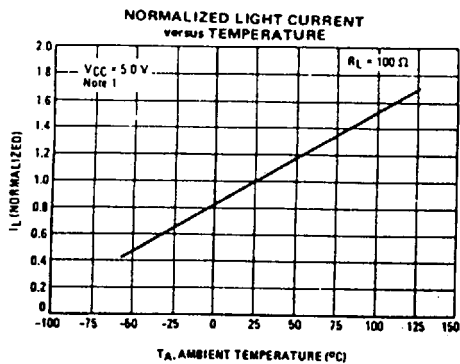
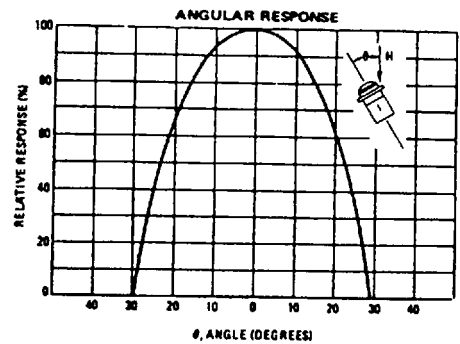
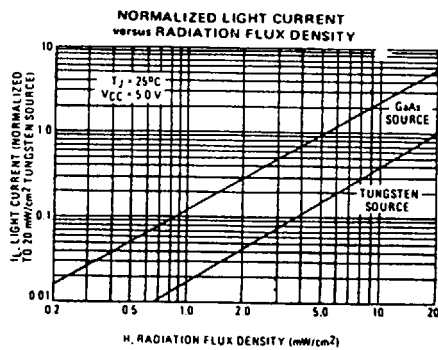
61055 SILICON PHOTOTRANSISTOR

ABSOLUTE MAXIMUM RATINGS 25°C FREE AIR TEMPERATURE UNLESS NOTED

Collector-Emitter Voltage	50 V
Emitter-Collector Voltage	7 V
Total Device Dissipation at (or below) 25°C Free-Air Temperature (See Note)	50 mW
Operating Free-Air Temperature Range	-65°C to +125°C
Storage Temperature Range	-65°C to +150°C
Soldering Temperature (3 minutes)	240°C

NOTE: Derate linearly to 125°C free-air temperature at the rate of 0.5 mW/°C.

TYPICAL CHARACTERISTICS



For unsaturated rise time measurements, radiation is provided by a pulsed GaAs (gallium-arsenide) LED ($\lambda = 0.9 \mu\text{m}$) with a pulse width equal to or greater than 200 microseconds.

GS 100-0974

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