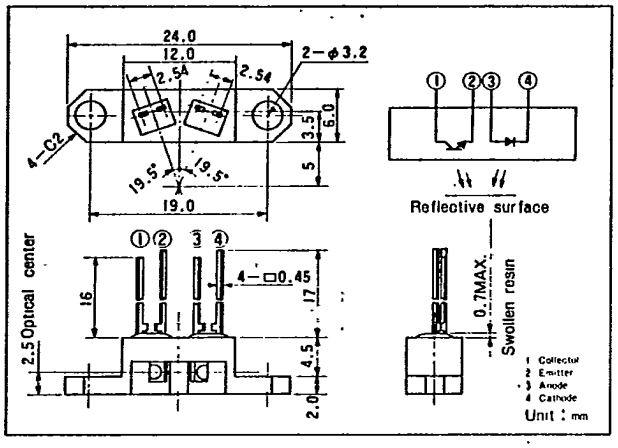
TECHNICAL DATA SHEET

CEN-710

Photo Reflector

■Dimensions



■Summary

The Centronic CEN-710 Photoreflector consists of a infrared light emitting diode and a phototransistor with a visible light filter in a single plastic package.

■Features

Space saving compared with an interrupter
Easy connection with control circuited
Visible light cut off filter

■Application Examples

Detection of coins, paper, cloth, film; detector of start and end marks on magnetic tape.

■Absolute Maximum Ratings

(Ta=25℃)

Ratings		Symbol	Rating Ratio	Unit
Input	Forward Current	I_F	50	mA
	Peak Forward Current *1	I_{FM}	1.1	A
	Reverse Voltage	V_R	6	V
	Power Dissipation	P	80	mW
Output	Collector-Emitter Voltage	V_{CEO}	35	V
	Emitter-Collector Voltage	V_{ECO}	6	V
	Collector Current	I_C	20	mA
	Collector Dissipation	P_C	80	mW
Operating Temperature		Topr	−25 ~ +85	℃

■Electro-Optical Characteristics

*1 Pulse width≦ 100μs, Duty: 0.01

(Ta=25℃)

Ratings		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward Voltage	V_F	I_F=30mA		1.2	1.5	V
	Peak Forward Current	V_{FM}	I_{FM}=0.6A	—	3	4	V
	Reverse Current	I_R	V_R= 4 V	—		10	μA
Output	Terminal Capacitance	Ct	V = O, f = 1 KHz		50	—	pF
	Dark Current	I_{CEO}	V_{CE}=25 V	-	1×10^{-9}	—	A
Current Transfer Ratio	Light Current	I_C	I_F=30mA	0.2	0.45	—	mA
	Cutoff Frequency	fc	R_L= 1 KΩ, I_C=0.2mA V_{CE}= 2 V, − 3dBspot		9	—	KHz
	Response Time(Rising)	tr	V_{CE}= 2 V, R_L= 1 KΩ		30		μs
	Response Time(Falling)	tf	I_C=0.2mA		30		μs
	Leak Current	I_{LEAK}	I_F=20mA, V_{CE}= 5 V			10	μA

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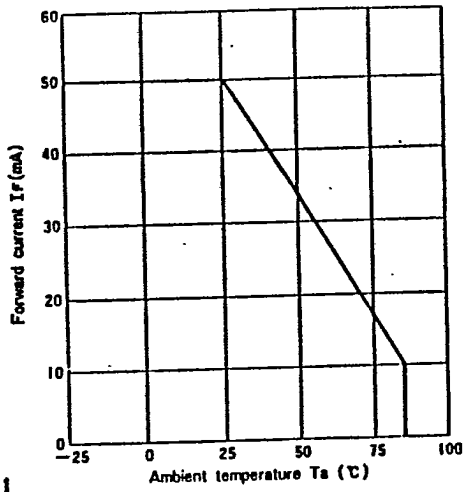

Fig. 1
Forward current vs. Ambient temperature

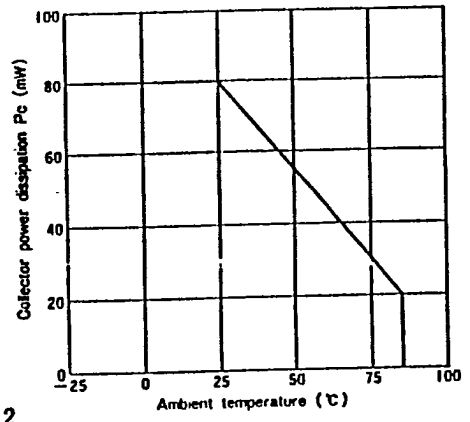

Fig. 2
Collector power dissipation vs. Ambient temperature

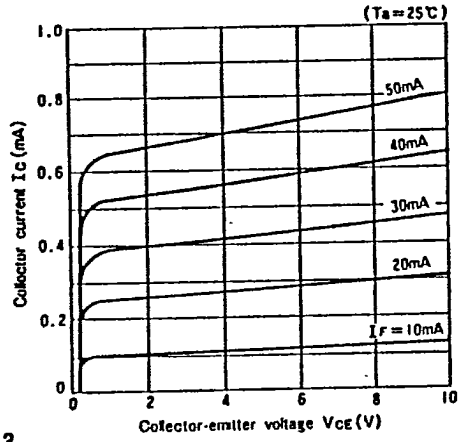

Fig. 3
Collector current vs. Collector-emitt voltage

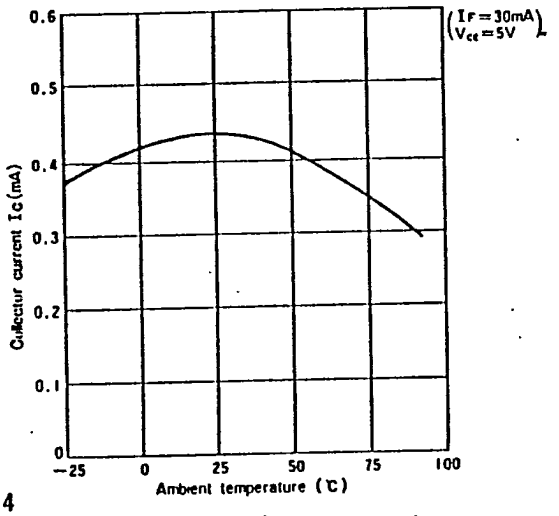

Fig. 4
Collector current vs. Ambient temperature

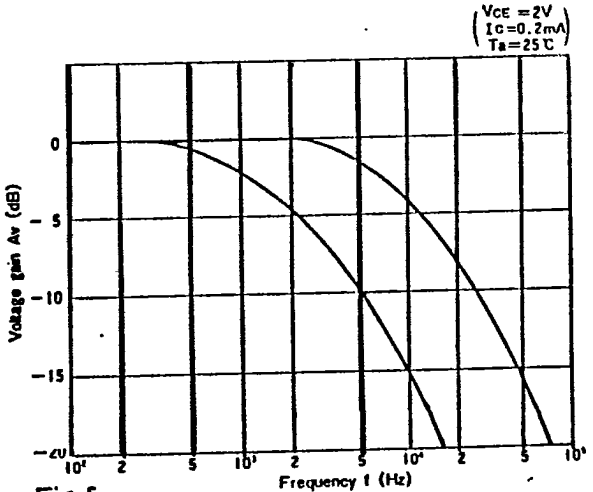

Fig. 5
Frequency response

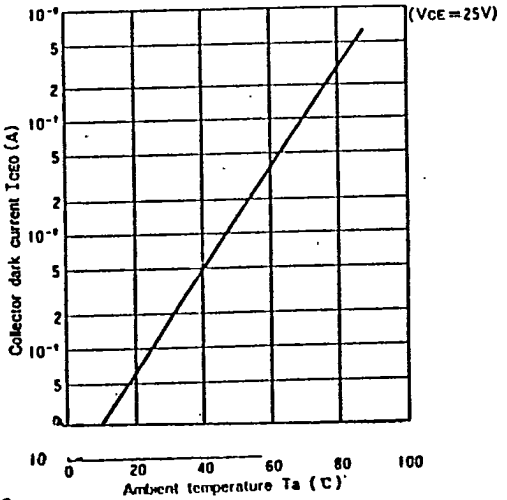

Fig. 6
Collector dark current vs. Ambient temperature