

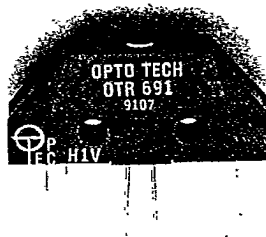


T 41-73

OPTO TECHNOLOGY

BAR CODE READER

TYPE OTR 680/OTR 690

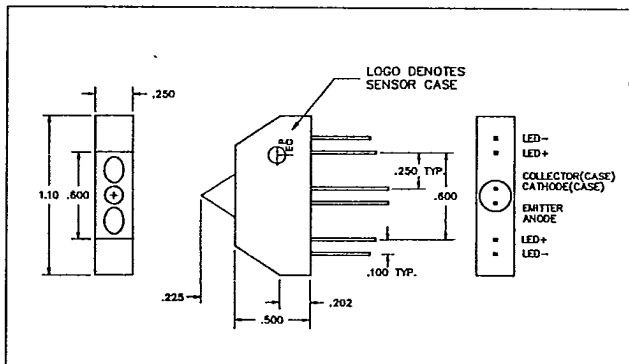


Features

- Bar code reader/ fine line sensor
- .007"-.013" resolution
- Compact size

Description

Opto Technology's OTR 680/690 series combines two emitters, a lens and photodetector into one low cost plastic housing. The rectangular aperture inside the package offers high resolution with good depth of field. The OTR 680 has two 940 nm infrared emitting diodes with PIN Diode or Phototransistor and the OTR 690 series has two 660nm visible light emitting diodes with either sensor. Custom apertures for these devices are available upon request.



Absolute Maximum Ratings

Infrared Emitting Diode 940 nm			
Power Dissipation*	P_E	75	mW
Forward Current (Continuous)	I_F	40	mA
Reverse Voltage	V_R	5	V

Visible Emitting Diode 660 nm			
Power Dissipation*	P_E	75	mW
Forward Current (Continuous)	I_F	40	mA
Reverse Voltage	V_R	4	V

*Derate 1.00 mW/°C Above 25°C

Phototransistor			
Power Dissipation*	P_D	200	mW
Collector-Emitter Voltage	V_{CE0}	35	V
Emitter-Collector Voltage	V_{ECO}	6	V

PIN Diode			
Power Dissipation	P_D	200	mW
Dark Current $V_R = 20V$	I_F	5	nA
Reverse Voltage	V_R	50	V

TOTAL DEVICE

Storage Temperature T_{STG} - 55°C to + 100°C
 Operating Temperature Range T_J - 40°C to + 85°C
 Lead Soldering Temperature T_L 260°C
 (5 seconds maximum)

OPTO TECHNOLOGY INC
 562 CHADDICK DRIVE, WHEELING, IL 60090
 TEL: (708) 537-4277 FAX: (708) 537-4785

TYPE OTR 680/OTR 690

T-41-73

Electrical Characteristics: (25°C)

TEST CONDITIONS (7)	OTR 680 (3)		OTR 681 (4)		UNITS
	MIN	MAX	MIN	MAX	
$I_{CE(ON)}$ $I_F = 40$ mA, $V_{CE} = 5$ V, $d = .22$ in (1)	50		0.10		μ A
I_{CX} $I_F = 40$ mA, $V_{CE} = 5$ V, (2)		40		5	nA
V_F $I_F = 40$ mA,		1.6		1.6	V

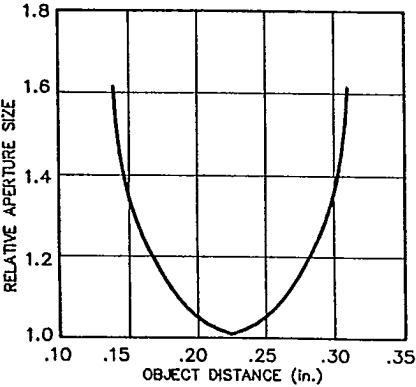
TEST CONDITIONS (7)	OTR 690 (5)		OTR 691 (6)		UNITS
	MIN	MAX	MIN	MAX	
$I_{CE(ON)}$ $I_F = 40$ mA, $V_{CE} = 5$ V, $d = .22$ in (1)	10		0.02		μ A
I_{CX} $I_F = 40$ mA, $V_{CE} = 5$ V, (2)		40		5	nA
I_F $I_F = 40$ mA		2.0		2.0	V

Notes:

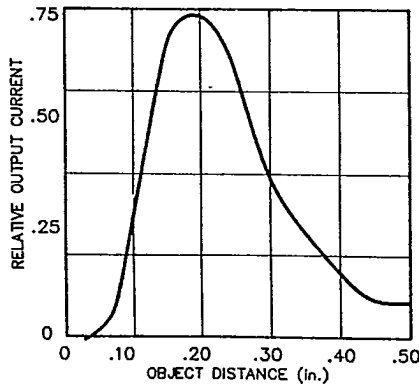
- (1) Reflecting surface is Eastman Kodak neutral white test card having a 90% diffused reflectance.
- (2) No reflecting surface.
- (3) IRED/ Phototransistor.
- (4) IRED/ PIN Diode.
- (5) Visible LED/ Phototransistor.
- (6) Visible LED/ PIN Diode.
- (7) .007 x .075 aperture used for test.

TYPICAL PERFORMANCE CURVES

RESOLUTION VS. OBJECT DISTANCE



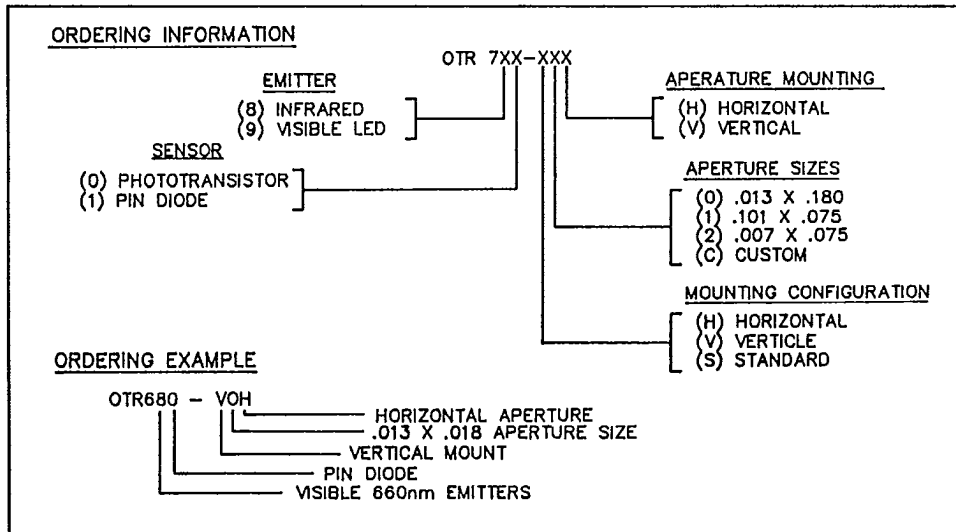
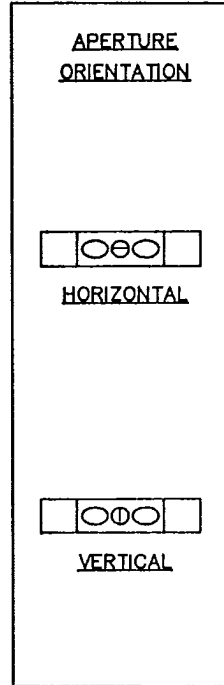
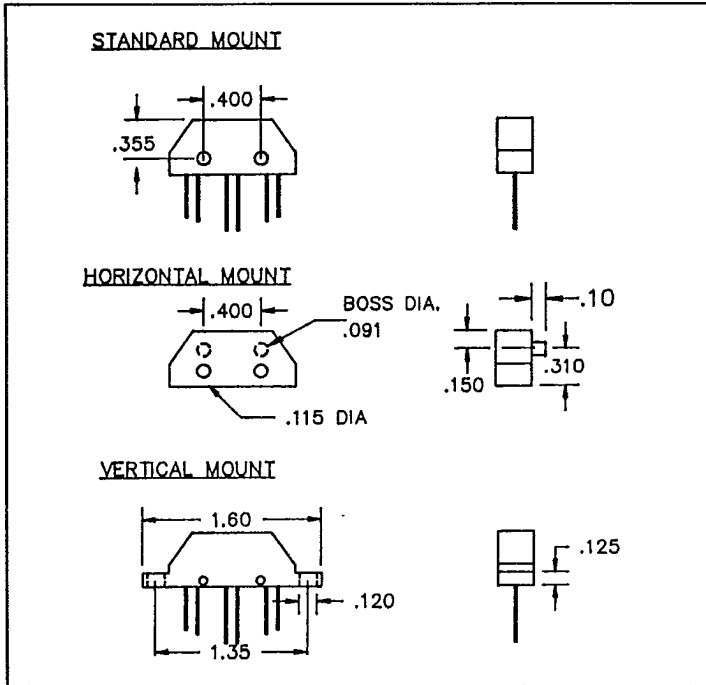
OUTPUT CURRENT VS. OBJECT DISTANCE



Opto Technology reserves the right to make changes at any time to improve product design and reliability.

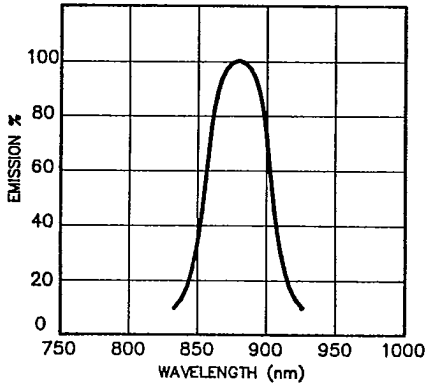


OPTO TECHNOLOGY

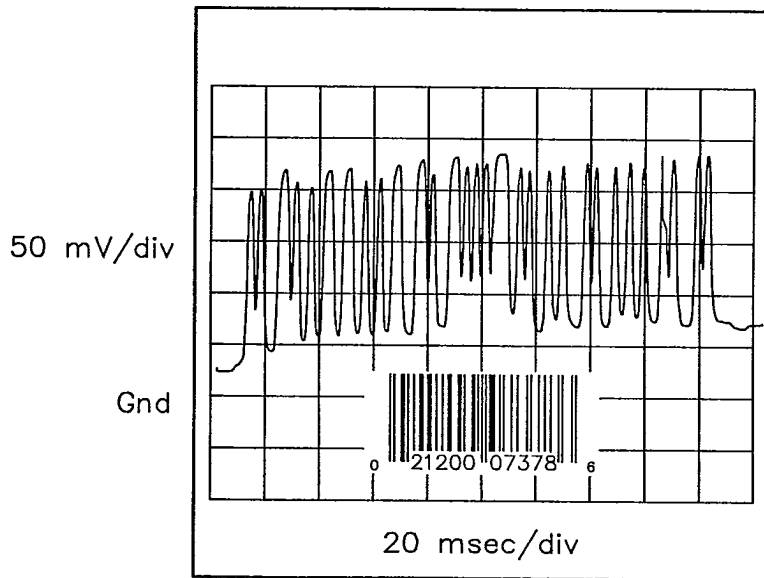
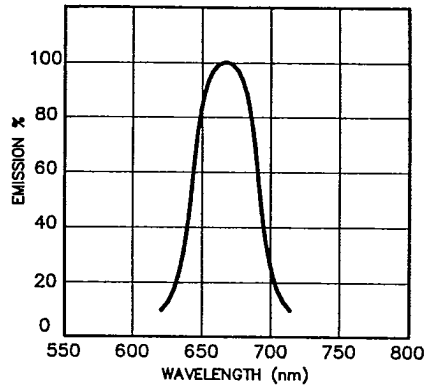


OPTO TECHNOLOGY INC
 562 CHADDICK DRIVE, WHEELING, IL 60090
 TEL: (708) 537-4277 FAX: (708) 537-4785

OTR680



OTR690



Opto Technology reserves the right to make changes at any time to improve product design and reliability.