

# OKI electronic components

## OC800

### Reflector-Type Photo Interrupter

#### GENERAL DESCRIPTION

The OC800 is a reflector-type photo interrupter that contains a high-output infrared light emitting diode and high-sensitivity phototransistor.

#### FEATURES

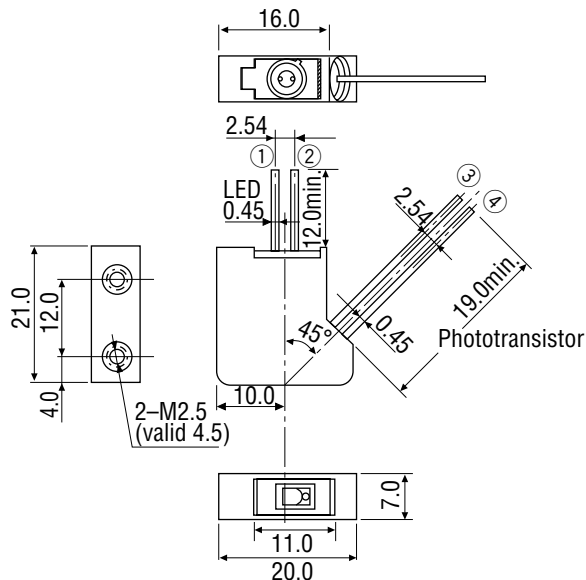
- High output current
- High resolution (capable of reading 0.25 mm bar codes)
- Outstanding durability and high reliability

#### APPLICATIONS

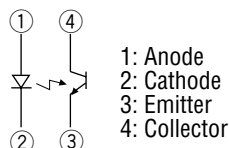
- Bar code reader
- Photoswitch
- Position detector
- Paper edge sensor

#### PIN CONFIGURATION

(Unit: mm)



#### • Pin Connection Diagram



## ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Test Condition	Rating	Unit
Input	Foward Current	$I_F$	Ta=25°C	100	mA
	Pulse Forward Current *1	$I_{FRM}$		1	A
	Reverse Voltage	$V_R$		6	V
	Power Dissipation	$P_D$		200	mW
Output	Collector-emitter Voltage	$V_{CEO}$		20	V
	Emitter-collector Voltage	$V_{ECO}$		5	V
	Power Dissipation	$P_C$		150	mW
Operating Temperature		$T_{opr}$	—	-20 to +65	°C
Storage Temperature		$T_{stg}$	—	-20 to +85	°C

\*1 Pulse width  $t_w=100 \mu s$ , cycle  $T=10 ms$

- **Wavelength at Peak Emission/Sensitivity**

Light source : 910 nm

Photodetector : 800 nm

## ELECTRICAL AND OPTICAL CHARACTERISTICS

(Ambient Temperature Ta=25°C)

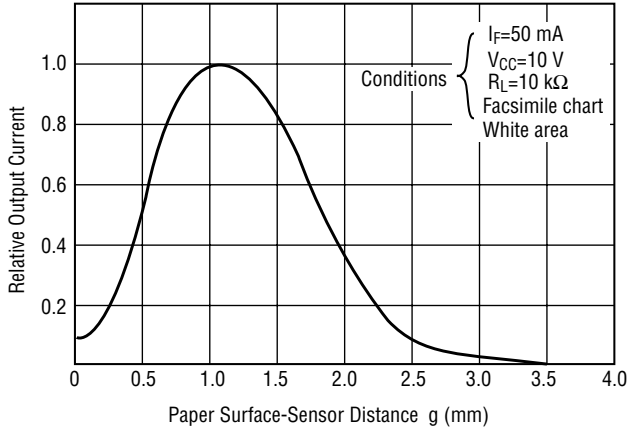
Parameter		Symbol	Min.	Typ.	Max.	Unit	Test Condition
Input	Foward Voltage	$V_F$	—	1.55	2.0	V	$I_F=100 mA$
	Reverse Current	$I_R$	—	—	10	$\mu A$	$V_R=6 V$
Output	Dark Current	$I_D$	—	—	100	nA	$V_{CE}=9 V$
Coupled	Photocurrent	$I_P$	4.0	—	100	$\mu A$	*1
	S/N	—	2.5	—	—	—	
	Photocurrent	$I_P$	5.5	—	120	$\mu A$	*2

\*1  $I_F=50 mA$ ,  $V_{CC}=10 V$ ,  $R_L=10 k\Omega$ ; distance between paper surface and sensor  $g=1.0 mm$   
Facsimile chart 0.25mm bar code

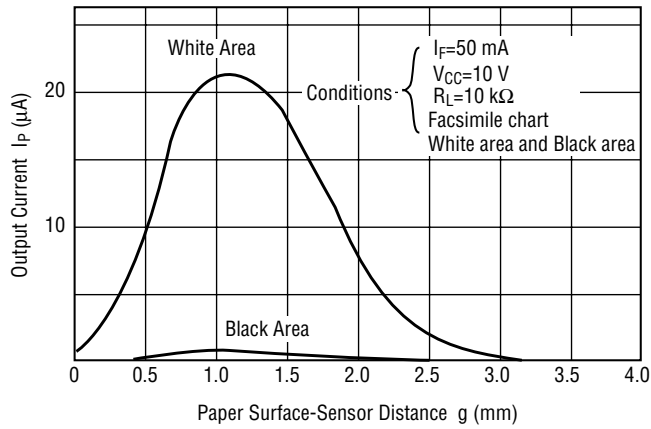
\*2  $I_F=50 mA$ ,  $V_{CC}=10 V$ ,  $R_L=10 k\Omega$ ; distance between paper surface and sensor  $g=1.0 mm$   
White area of facsimile chart

**TYPICAL CHARACTERISTICS**

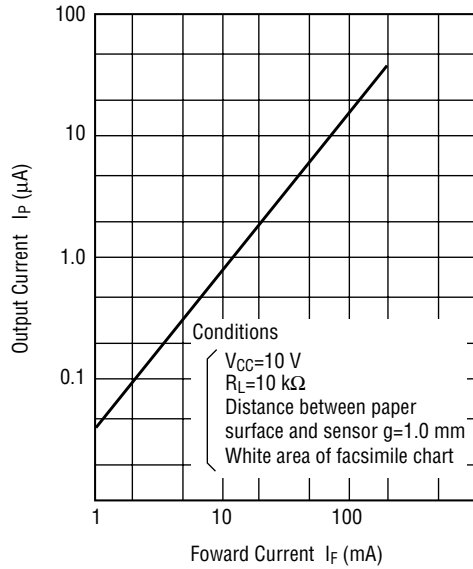
- **Output Current vs. Paper Surface-Sensor Spacing (Ta=25°C)**



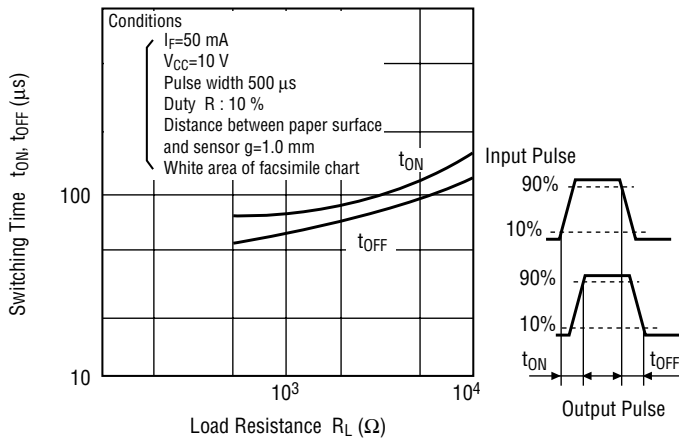
- **Output Current vs. Paper Surface-Sensor Spacing (Ta=25°C)**



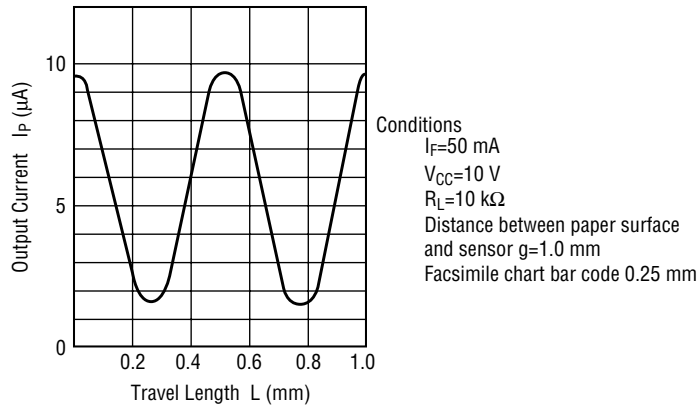
• Output Current vs. Forward Current (Ta=25°C)



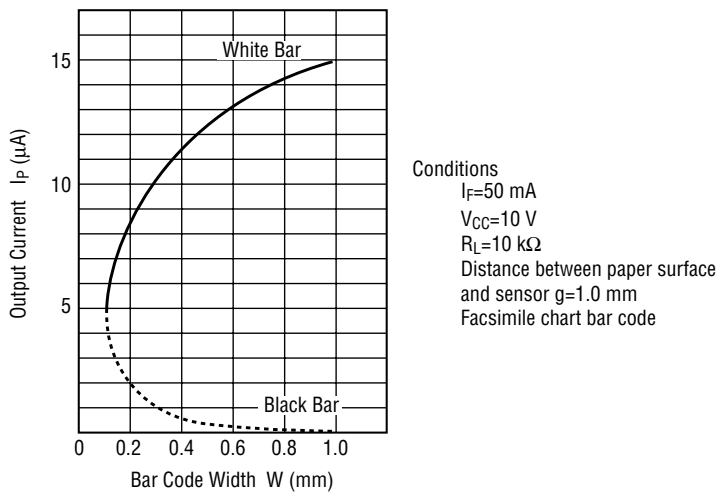
• Switching Time vs. Load Resistance (Ta=25°C)



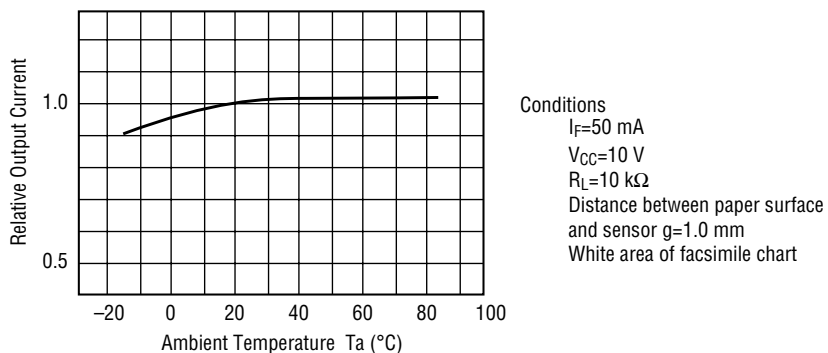
• Bar Code (0.25 mm) Output Current vs. Travel Length ( $T_a=25^\circ\text{C}$ )



• Output Current vs. Bar Code Width ( $T_a=25^\circ\text{C}$ )



• Output Current vs. Ambient Temperature



• Test Circuit

