



SLOTTED OPTICAL SWITCH

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ Unless Otherwise Specified)	
Storage Temperature	-40°C to $+85^\circ\text{C}$
Operating Temperature	-40°C to $+85^\circ\text{C}$
Soldering:	
Lead Temperature (Iron)	240°C for 5 sec. ^(2,3,4)
Lead Temperature (Flow)	260°C for 10 sec. ^(2,3)
INPUT DIODE	
Continuous Forward Current	50 mA
Reverse Voltage	5.0 Volts
Power Dissipation	100 mW ⁽¹⁾
OUTPUT TRANSISTOR	
Collector-Emitter Voltage	30.0 Volts
Emitter-Collector Voltage	5.0 Volts
Power Dissipation	100 mW ⁽¹⁾

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless Otherwise Specified)					
PARAMETER	SYMBOL	MIN.	MAX.	UNITS	TEST CONDITIONS
INPUT DIODE					
Forward Voltage	V_F	—	1.70	V	$I_F = 20\text{ mA}$
Reverse Leakage Current	I_R	—	100	μA	$V_R = 2.0\text{ V}$
OUTPUT TRANSISTOR					
Emitter-Collector Breakdown	BV_{ECO}	5	—	V	$I_E = 100\ \mu\text{A}$, $E_e = 0$
Collector-Emitter Breakdown	BV_{CEO}	30	—	V	$I_C = 1.0\text{ mA}$, $E_e = 0$
Collector-Emitter Leakage	I_{CEO}	—	100	nA	$V_{CE} = 10.0\text{ V}$, $E_e = 0$
COUPLED					
On-State Collector Current					
OPB865N11	$I_{C(ON)}$	500	—	μA	$I_F = 20\text{ mA}$, $V_{CE} = 5\text{ V}$
OPB865N51	$I_{C(ON)}$	500	—	μA	$I_F = 20\text{ mA}$, $V_{CE} = 5\text{ V}$
OPB865N55	$I_{C(ON)}$	500	—	μA	$I_F = 20\text{ mA}$, $V_{CE} = 5\text{ V}$
Saturation Voltage	$V_{CE(SAT)}$	—	0.40	V	$I_F = 20\text{ mA}$, $I_C = 400\ \mu\text{A}$

NOTES
1. Derate power dissipation linearly 1.67 mW/ $^\circ\text{C}$ above 25°C .
2. RMA flux is recommended.
3. Methanol or Isopropyl alcohols are recommended as cleaning agents.
4. Soldering iron tip $\frac{1}{16}$ " (1.6 mm) from housing.