

Photo Diodes

Type No.	Features	Maximum Ratings(Ta=25°C)			Electrical, Optical characteristics(Ta=25°C)			
		Reverse Voltage (mW)	Power dissipation (V)	Operating Temperature (°C)	Short Circuit Current(μA)		Dark Current(nA)	
					Min.	E(mW/cm ²)	Max.	V _R (V)
TPS703	Side View	20	150	-30~+80	0.9	0.1	30	10
TPS704		20	150	-30~+60	0.5	0.1	30	10
TPS705	TO-92	20	150	-30~+80	0.5	0.1	30	10
TPS706		20	150	-30~+80	1.0	0.1	30	10
TPS708	TO-18(with lens can)	30	100	-40~+125	1.0	0.1	60	10
TPS710	One dimensional Position Sensor of Side View	20		-25~+80	Standard	0.01	3	2

Photo ICs

Type No.	Features	Maximum Ratings(Ta=25°C)			Electrical, Optical Characteristics(Ta=25°C)				
		Power Supply Voltage (V)	Low Level Output Current (mA)	Operating Temperature (°C)	Output Format		Threshold Radiant Incidence(mW/cm ²)		
					With Resistance	Open Collector	L→H Max.	H→L Max.	V _{CC} (V)
TPS805	Side View	17	50	-25~+85		○	0.3	-	5
TPS806		17	50	-25~+85		○	-	0.3	5
TPS807		17	50	-25~+85	○		0.3	-	5
TPS808		17	50	-25~+85	○		-	0.3	5
NEW TPS811	Compact Side View	17	50	-30~+80		○	0.3	-	5
NEW TPS812		17	50	-30~+80		○	0.3	-	5
NEW TPS813		17	50	-30~+80	○		-	0.3	5
NEW TPS814		17	50	-30~+80	○		-	0.3	5
NEW TPS832(Note)	Side View	7	0.1	-25~+75	○		-	-	5
NEW TPS833(Note)		7	0.1	-25~+75		○	-	-	3

(Note) Under Development

Red LEDs (For Optical Fiber)

Type No.	Features	Maximum Ratings(Ta=25°C)			Electrical, Optical Characteristics(Ta=25°C)	
		Forward Current (mA)	Pulse Forward Current (mA)	Operating Temperature (°C)	Fiber Coupled Power(dBm) Typical	I _r (mA)
TLRA280	φ4.8 Flat Top	50	200	-30~+85	-4.0	30
TLRC280		70	300	-30~+85	-8.5	30
TLRA281	Flat Side View	50	200	-30~+85	-4.0	30
TLRC281		70	300	-30~+85	-8.5	30
TLRA282	φ3.1 Flat Top	50	200	-30~+85	-6.0	30
TLRA285		50	200	-30~+85	-6.0	30

Photo Diodes (For Optical Fiber)

Type No.	Features	Maximum Ratings(Ta=25°C)			Electrical, Optical Characteristics(Ta=25°C)			
		Reverse Voltage (V)	Power dissipation (mW)	Operating Temperature (°C)	Fiber Coupled Sensitivity(A/W) Typical	V _R (V)	λ(nm)	P _f (μW)
TPS721A	Flat Side View	50	150	-30~+85	0.36	10	660	1
TPS723A		30	150	-30~+80	0.37	10	660	1

Photo ICs (For Optical Fiber)

Type No.	Features	Maximum Ratings(Ta=25°C)			Electrical, Optical Characteristics(Ta=25°C)			
		Power Supply Voltage (V)	Maximum Ratings (V)	Operating Temperature (°C)	Threshold Optical Output Power(dBm)			
				L→H Typical	H→L Typical	V _{CC} (V)	λ _p (nm)	
TPS823	Flat Side View	5.5	5.5	-25~+85	-	-15.9	5	660
TPS825		17	-	-25~+85	-23	-	5	660
TPS826		17	-	-25~+85	-	-23	5	660

Electrical, Optical Characteristics(Ta=25°C)						Application	External Dimension No.	Type No.
Rize Time(ns)			Peak Sensitive Wave Length (nm)	Half Detecting Angle (°)	Visible Light Cut-off			
Typical	V _R (V)	R _L (Ω)						
100	10	1000	960	± 65	○	Remote-control	0-16	TPS703
100	10	1000	1000	± 65	○			TPS704
100	10	1000	970	± 65	○		0-17	TPS705
100	10	1000	970	± 65	○			TPS706
100	10	1000	850	± 15				Optoelectric Switch
—	—	—	880	—		Camera	0-21	TPS710

Electrical, Optical Characteristics(Ta=25°C)						Application	External Dimension No.	Type No.
Propagation Delay Time(μs)			Peak Sensitive Wave Length (nm)	Half Detecting Angle (°)	Visible Light Cut-off			
L→H Typical	H→L Typical	E(mW/cm ²)						
2	6	2	900	±15	○	Photo Interrupter	0-14	TPS805
6	2	2	900	±15	○			TPS806
2	6	2	900	±15	○			TPS807
6	2	2	900	±15	○			TPS808
2.5	5.5	2	900	±15	○			Photo Interrupter
5.5	2.5	2	900	±15	○	NEW TPS812		
2.5	5.5	2	900	±15	○	NEW TPS813		
5.5	2.5	2	900	±15	○	NEW TPS814		
—	—	—	900	±31.5/±23	○	Remote-control	0-24	
—	—	—	900	±31.5/±23	○			NEW TPS833(Note)

Electrical, Optical Characteristics(Ta=25°C)						Application	External Dimension No.	Type No.
Forward Voltage(V)		Peak Mission Wave Length (nm)	Cut-off Frequency(MHz)					
Typical	I _F (mA)		Typical	I _F (mA)				
1.9	30	660	3	30mA DC+6mA p-p	Plastic Fiber	0-18	TLRA280	
1.85	30	660	7	30mA DC+6mA p-p			TLRC280	
1.9	30	660	3	30mA DC+6mA p-p			0-20	TLRA281
1.85	30	660	7	30mA DC+6mA p-p		TLRC281		
1.9	30	660	3	30mA DC+6mA p-p		0-19		TLRA282
1.9	30	660	3	30mA DC+6mA p-p			TLRA285	

Electrical, Optical Characteristics(Ta=25°C)						Application	External Dimension No.	Type No.
Dark Current(nA)		Peak Sensitive Wave Length Typical (nm)	Cut-off Frequency(MHz)					
Typical	V _R (V)		Typical	Typical	V _R (V)	R _L (Ω)		
0.5	10	840	70	10	50	Plastic Fiber Polymerclad Fiber	0-20	TPS721A
0.5	10	840	—	—	—			TPS723A

Electrical, Optical Characteristics(Ta=25°C)						Application	External Dimension No.	Type No.
Propagation Delay Time(μs)					Peak Sensitive Wave Length (nm)			
L→H Typical	H→L Typical	V _{CC} (V)	R _L (Ω)	Pf(μW)				
0.07	0.08	5	350	120	850	Plastic Fiber Polymerclad Fiber	0-21	TPS823
2	6	5	280	50	850			TPS825
6	2	5	280	50	850			TPS826