



STV5805

PHOTO DETECTOR FOR DIGITAL VIDEO DISK

PRELIMINARY DATA

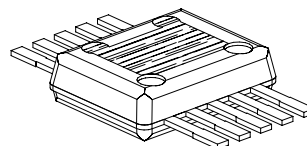
- LARGE BANDWIDTH (30MHz) AND LOW NOISE I/U AMPLIFIER
- SENSITIVITY SWITCHING FOR OPTICAL PICKUPS
- DETECTOR PATTERN ADAPTED FOR EFM SIGNAL DETECTION, FOCUS AND TRACKING CONTROLS

DESCRIPTION

This six diodes photodetector includes six low noise I/V amplifiers with a sensitivity switching for adaptation to different optical pickups and disks.

The detector pattern is adaptable for astigmatism focus method, 3 beams tracking and differential phase detection methods.

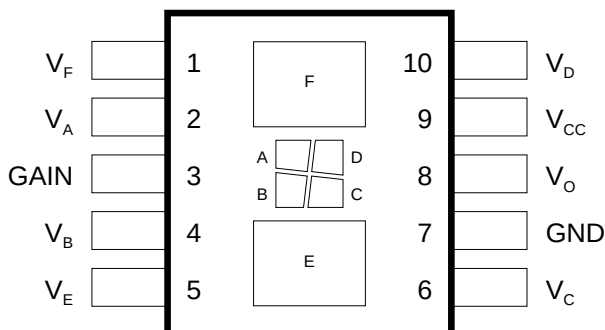
The STV5805 is adapted for pick-up of DVD-ROM and DVD players up to 3 x speed for both 1 layer and 2 layer discs.



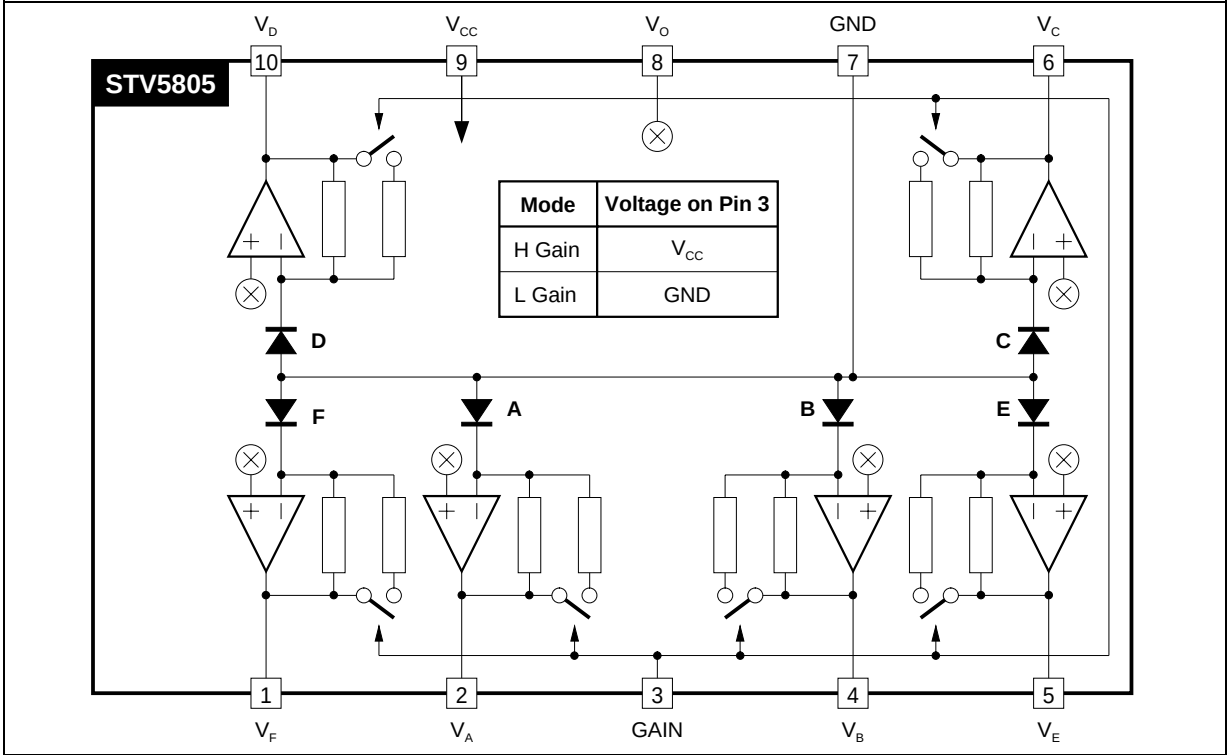
OPTOSO10L
(Plastic Transparent Package)

ORDER CODE : STV5805D

PIN CONNECTIONS



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CC}	Power Supply Voltage	6	V
T_j	Junction Temperature	150	°C
T_{oper}	Operating Temperature	- 20, +70	°C

THERMAL DATA

Symbol	Parameter	Value	Unit
$R_{th(j-a)}$	Junction-ambient Thermal Resistance	100	°C/W

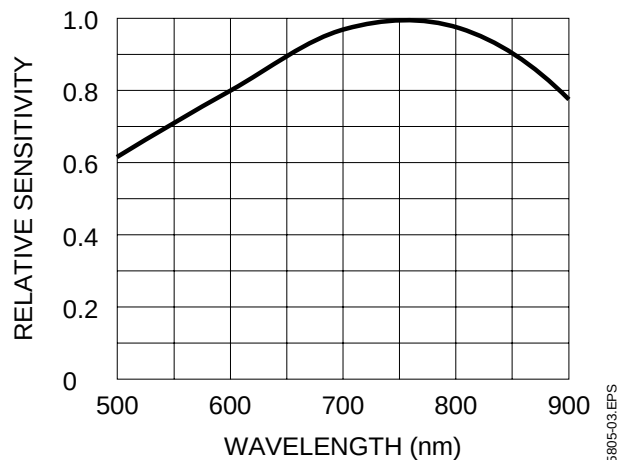
RECOMMENDED OPERATING CHARACTERISTICS

Symbol	Parameter	Min.	Typ.	Max.	Unit
V_{CC}	Power Supply	4.75	5	5.25	V

ELECTRICAL CHARACTERISTICS(V_{CC} = 5V, V_O = 2.5V, Light wavelength = 635 to 680nm, T_{amb} = 25°C, unless otherwise specified)

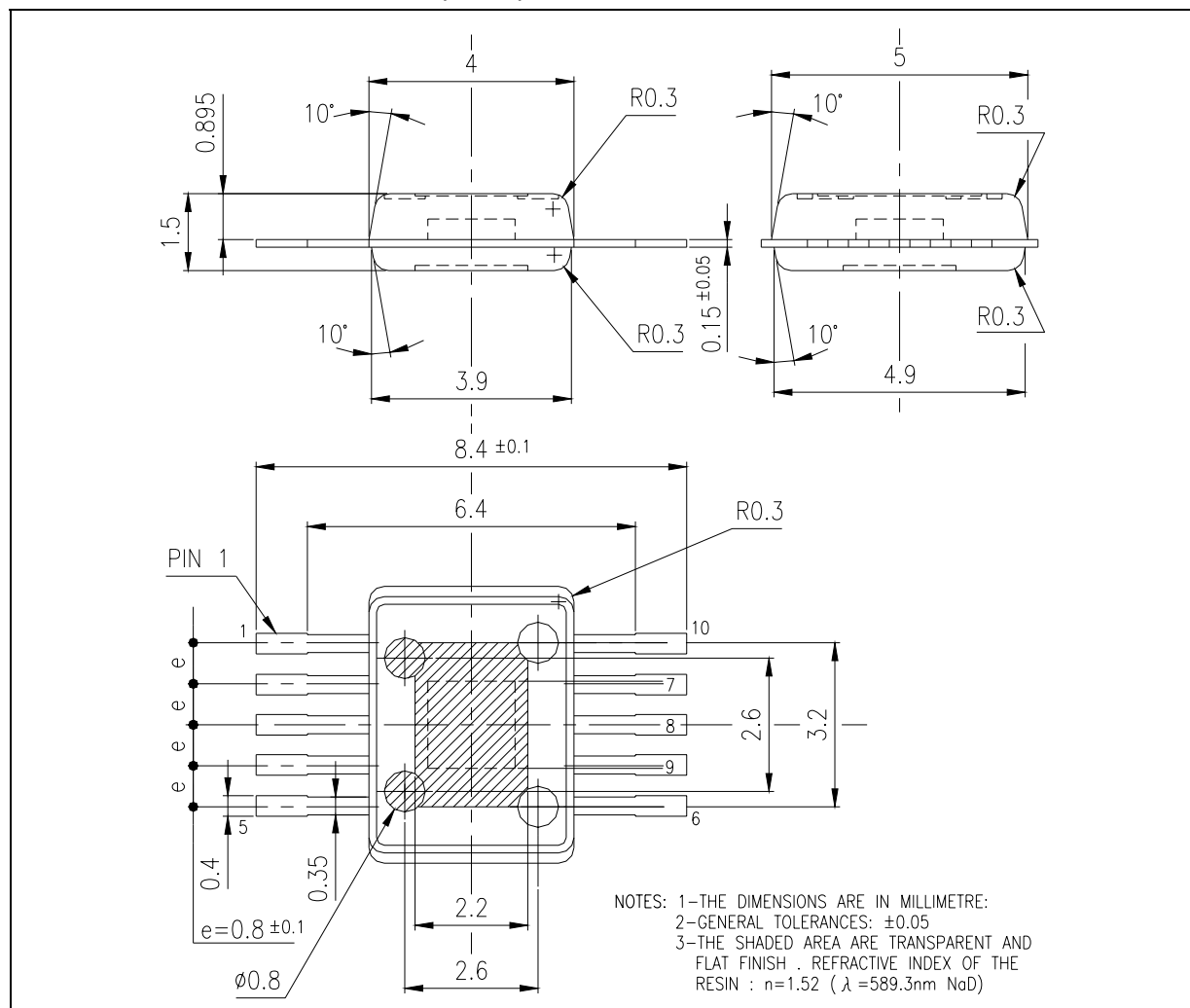
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CC}	Supply Current	Gain = H or L		25		mA
SADH SADL	Sensitivity A to D	Gain = H Gain = L	27 9	36 12	45 15	mV/μW mV/μW
SEFH SEFL	Sensitivity E, F	Gain = H Gain = L	45 15	60 20	75 35	mV/μW mV/μW
BWAD BWEF	Bandwidth at -3dB (A to D) Bandwidth at -3dB (E, F)	Gain = H or L Gain = H or L	25 2	30 5		MHz MHz
DV0	Offset Voltage versus V _O	Gain = H or L, in the dark	-15	0	15	mV
DVAB	Offset Voltage (V _A - V _B)	Gain = H or L, in the dark	-15	0	15	mV
DVCD	Offset Voltage (V _C - V _D)	Gain = H or L, in the dark	-15	0	15	mV
DVM	Offset Voltage [(V _A + V _C) - (V _B + V _D)]	Gain = H or L, in the dark	-15	0	15	mV
DVEF	Offset Voltage (V _E - V _F)	Gain = H or L, in the dark	-15	0	15	mV
ENADH ENADL	Equivalent Noise Level (A to D)	10MHz, BW = 30kHz, in the dark Gain = H Gain = L		-74 -83	-66 -75	dBm dBm
ENEFH ENEFL	Equivalent Noise Level (E, F)	10MHz, BW = 30kHz, in the dark Gain = H Gain = L		-62 -71		dBm dBm
I _{VO}	Input Current on V _O	V _O = 2.5V		0.6		mA
I _{GAINH} I _{GAINL}	Input Current on Gain	Gain = V _{CC} Gain = GND		-1 +1		μA μA

5805-04.TBL

Figure 1 : Typical Spectral Sensitivity

5805-03.EPS



PACKAGE MECHANICAL DATA**10 PINS - PLASTIC TRANSPARENT (OPTO)**

PMOPT010.EPS

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