

HUL7207

Hologram Unit

For optical information processing

Features

- Smaller package size achieved through micro-mirror integration (4.8 × 8.2 × 4.3 mm)
- Fast response ($f_c = 50$ MHz)
- Focus error signal detection : SSD method
- Tracking error signal detection : 3-beam method
- Low-power semiconductor laser included

Applications

- CD-ROM drives (supports 40 time speed CD-ROM drives)

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

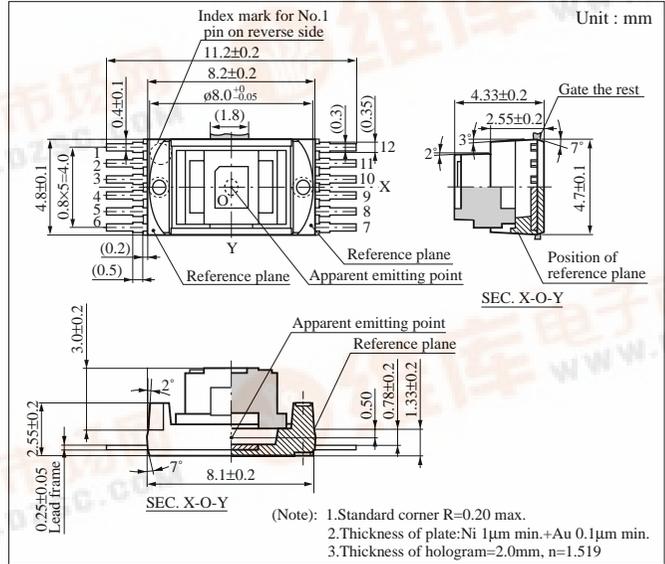
Parameter	Symbol	Ratings	Unit
Laser beam output*1	P_O	0.3	mW
Laser reverse voltage	$V_{R(LD)}$	2	V
Monitor PD reverse voltage	$V_{R(mon)}$	6	V
Supply voltage	V_{CC}	6	V
Operating supply voltage range	V_{CC}	+3.0 to +5.5	V
Reference voltage	V_C	+1.3 to V_{CC} -1.3	V
Operating ambient temperature	T_{opr}	-10 to +60	°C
Storage temperature	T_{stg}	-40 to +85	°C

*1 Light emitting output through objective lens

Unit Characteristic Specifications ($T_c = 25 \pm 3^\circ\text{C}$)

Parameter	Symbol	Conditions	min	typ	max	Unit
Laser beam output*1	P_O	$V_{RF} = 570\text{mV}, V_{CC} = 5\text{V}$		0.18	0.25	mW
Operating current	I_{OP}	CW $V_{RF} = 570\text{mV}, V_{CC} = 5\text{V}$	25	35	45	mA
Operating voltage	V_{OP}	CW $V_{RF} = 570\text{mV}, V_{CC} = 5\text{V}$		1.9	2.4	V
Oscillating wavelength	λ_L	$V_{RF} = 570\text{mV}, V_{CC} = 5\text{V}$	775	795	815	nm
Focus error signal amplitude	V_{FE}	$V_{RF} = 570\text{mV}, V_{CC} = 5\text{V}$	340	480	620	mV
Tracking error signal amplitude	V_{TE}	$V_{RF} = 570\text{mV}, V_{CC} = 5\text{V}$	220	340	460	mV
Focus error signal pull-in range	D_{FE}	$V_{RF} = 570\text{mV}, V_{CC} = 5\text{V}$	9	12	16	μm
Frequency characteristics	f_c		40	50		MHz

*1 Light emitting output through objective lens



■ Block Diagram of Circuit Functions

