

Hologram Unit HUL7206

Overview

The Laser-Detector-Hologram Unit, LDHU (HUL7206) is constructed of laser diode, photodetectors, head amplifier, grating, beam splitter and an optical hologram element which are integrated in a compact plastic flat package. HUL7206 is pursued fast response speed and realized ($f_c = 50\text{MHz}$).

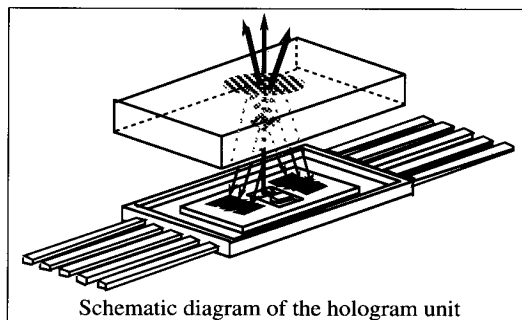
It is suitable for CD-ROM drive system to play back 30 to 32 times speed. Not only its speed can be highly and size can be downsized, but also the assembly process can be simplified. That bring contributions to the realizations of low cost.

Features

- Small size ($4.8 \times 8.2 \times 4.3\text{mm}^3$): Optical integration of LD and PD owing to the 45° built-in micro-mirror mounted on Si photodetector substratum.
- Built-in I-V conversion amplifier.
- SSD method for a focusing servo system.
- Three beams method for a tracking servo system.
- Low current operating semiconductor laser (RISA laser).

Applications

- CD for Car.



Schematic diagram of the hologram unit

Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Laser optical output P_o (mW)	Reverse voltage V_R (V)		Power supply voltage (V)	Operating temperature T_{opr} ($^\circ\text{C}$)	Storage temperature T_{stg} ($^\circ\text{C}$)
	Laser	Photo-diode for monitor			
0.3 (Note 1)	2	6	6	$-10 \sim +60$	$-40 \sim +85$

Note 1) Laser optical output is equal to 5mW on the laser diode edge surface

Electrical and Optical characteristics (Measured at RF signal amplitude $V_{RF} = 420\text{mV}$)

Parameter		Symbol	Typical	Unit
Optical output (Note 2)		P_o	0.18	mW
Laser characteristics	Operating current	I_{op}	35	mA
	Operating voltage	V_{op}	1.9	V
	Oscillation wave length	λ	795	nm
Unit characteristics	Focus error signal amplitude	V_{FE}	480	mV
	Tracking error signal amplitude	V_{TE}	310	mV
	Focus error signal pull-back range	D_{FE}	12	μm
	Frequency characteristics (-3dB)	f_c	50	MHz

Note 2) Laser optical output is equal to 5mW on the laser diode edge surface

1 The products and specifications are subject to change without any notice. Please ask for the latest Product Standards to guarantee the satisfaction of your product requirements.

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