

# HUH7282/HUH7283

## For CD-R/RW Drivers Hologram Unit

For optical information processing  
(Recordable × 16 speed + readable × 48 speed)

### ■ Features

- It is developed real with window structured high power laser diode, and realized high speed recording
- 16 × writing/48 × reading of CD-R/RW possible
- Thin (4.0 mm) package realizes thin and simple pick-up

### ■ Applications

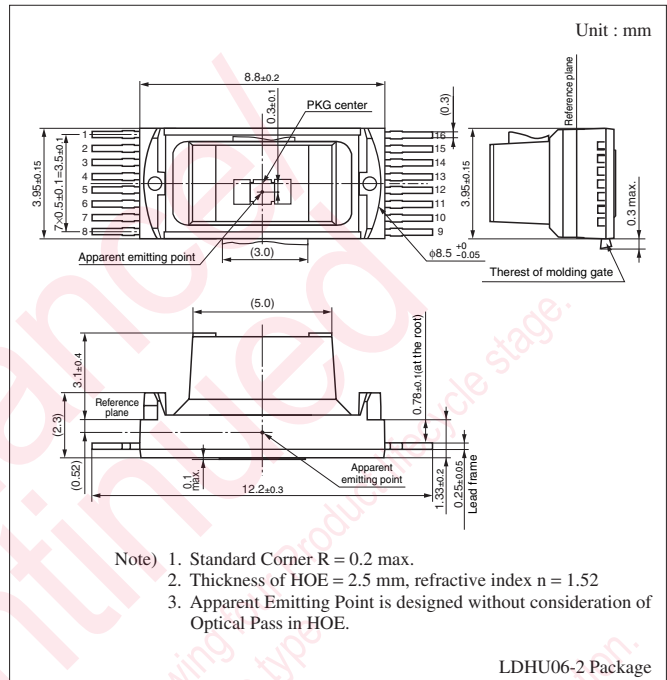
- CD-R/RW

### ■ Tracking error signal output pin count

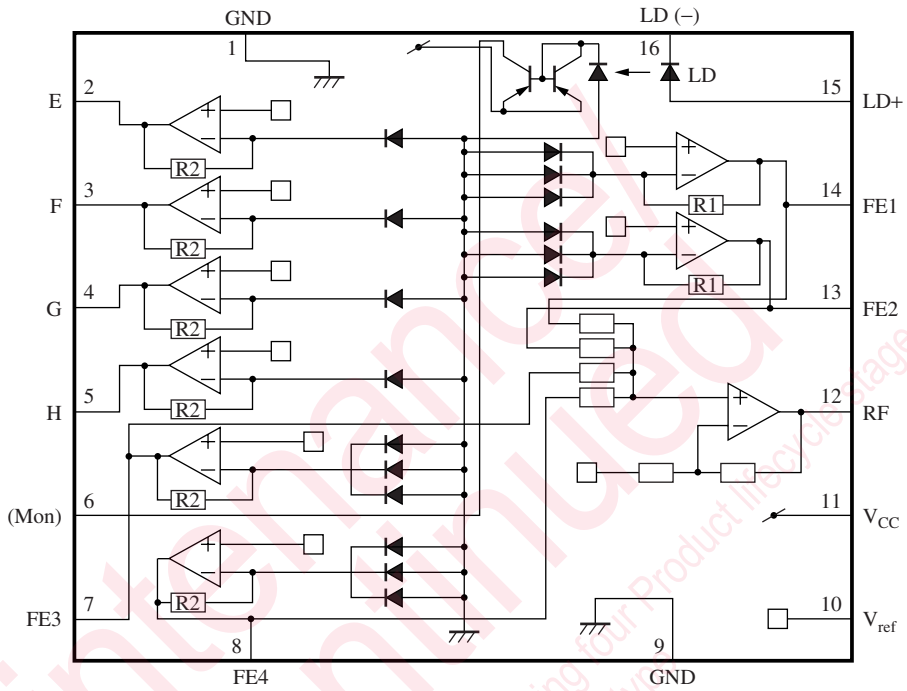
- HUH7282: 4 pins  
HUH7283: 2 pins

### ■ Absolute Maximum Ratings

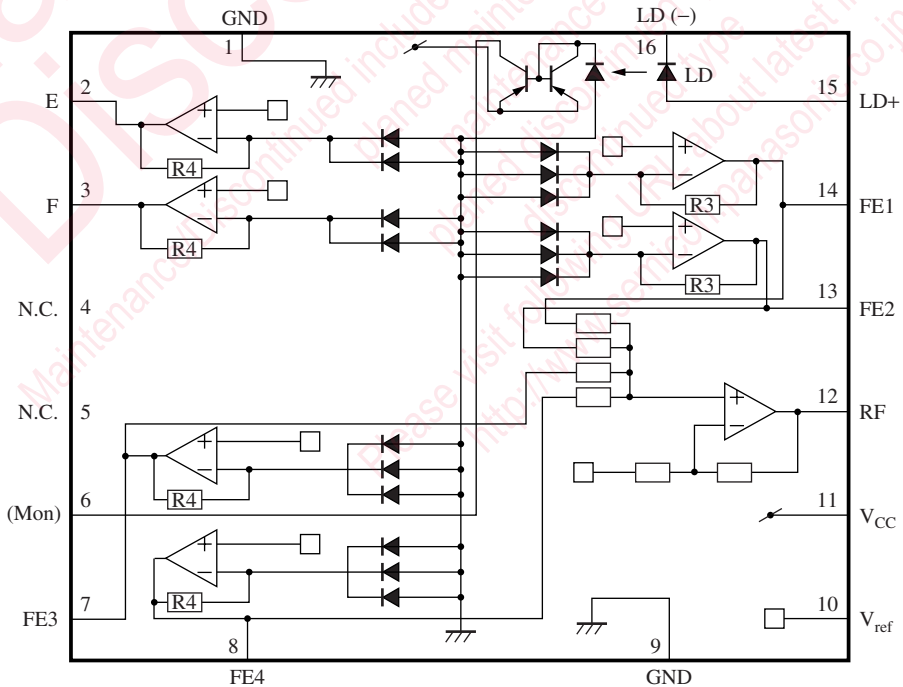
Parameter	Symbol	Rating	Unit
Radiant power	$P_O$	90 (CW), 135 (pulse)	mW
Reverse voltage	$V_{R(LD)}$	1.5	V
Supply voltage	$V_{CC}$	6	V
Reference voltage	$V_{ref}$	+1.5 to +2.3	V
Operating ambient temperature	$T_{opr}$	-10 to +60	°C
Storage temperature	$T_{stg}$	-40 to +85	°C



- Block Diagrams
- HUH7282



- HUH7283



## Pin Descriptions

### • HUH7282

Pin No.	Description	Pin No.	Description
1	GND	9	GND
2	E Signal out ( $V_E$ )	10	$V_{ref}$
3	F Signal out ( $V_F$ )	11	$V_{CC}$
4	G Signal out ( $V_G$ )	12	RF
5	H Signal out ( $V_H$ )	13	FE2 Signal out ( $V_{FE2}$ )
6 *	(Mon. out) value not guaranteed	14	FE1 Signal out ( $V_{FE1}$ )
7	FE3 Signal out ( $V_{FE3}$ )	15	LD(+)
8	FE4 Signal out ( $V_{FE4}$ )	16	LD(-)

Note) \*: The pin 6 must be connected to GND level.

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Pin No.	Description	Pin No.	Description
1	GND	9	GND
2	E Signal out ( $V_E$ )	10	$V_{ref}$
3	F Signal out ( $V_F$ )	11	$V_{CC}$
4	N.C.	12	RF
5	N.C.	13	FE2 Signal out ( $V_{FE2}$ )
6 *	(Mon. out) value not guaranteed	14	FE1 Signal out ( $V_{FE1}$ )
7	FE3 Signal out ( $V_{FE3}$ )	15	LD(+)
8	FE4 Signal out ( $V_{FE4}$ )	16	LD(-)

Note) \*: The pin 6 must be connected to GND level.

## Electro-Optical Characteristics

### • Unit characteristic specifications $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Threshold current	$I_{th}$	CW	15	26	40	mA
Operating current	$I_{OP}$	CW, $P_O = 80\text{ mW}$	85	105	125	mA
Operating voltage	$V_{OP}$		1.6	1.9	2.5	V
Oscillation wavelength	$\lambda$		779	785	791	nm
Focus error signal amplitude	$V_{FE}$	$P_{LO} = 0.8\text{ mW}$ , $V_{CC} = 5\text{ V}$ , $V_{ref} = 1.65\text{ V}$	120	200	280	mV
Focus error signal balance	$B_{FE}$		-20	0	+20	%
Main beam signal amount	$V_{TE}$		150	255	360	mV
Main beam signal balance	$B_{TE}$		-30	0	+30	%
Sub beam signal amount	$V_{TC}$		120	205	290	mV
RF signal amount	$V_{RF}$		355	590	825	mV

# Caution for Safety

 **DANGER**

■ **This product contains Gallium Arsenide (GaAs).**

GaAs powder and vapor are hazardous to human health if inhaled or ingested. Do not burn, destroy, cut, cleave off, or chemically dissolve the product. Follow related laws and ordinances for disposal. The product should be excluded from general industrial waste or household garbage.

■ **Do not touch or look into the laser beam directly.**

The laser beam may cause injury to the eye or skin, or loss of eyesight.

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