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LT0H12M

■ Electro-optical Characteristics

(T_c=25°C)

Parameter				Symbol	Condition		MIN	TYP	MAX	Units
Laser (without hologram glass)	Threshold current			I _{th}	-		-	60	80	mA
	Operating current			I _{op}	P _o =30mW *1		-	115	150	mA
	Operating voltage			V _{op}			-	1.85	2.2	V
	Wavelength *2			λ _p			770	780	795	nm
	Monitor current			I _m	P _o =30mW *1 ,V _R =15V		0.1	0.3	2	mA
	Radiation Characteristics	Angle	Parallel	θ _{//}	P _o =30mW *1		8	9.5	13	°
		*3	Perpen- dicular	θ _⊥			20.	26	32	°
	Ripple			-20			-	20	%	
	Emission Point accuracy	Angle	Δφ _{//}	-2			-	2	°	
			Δφ _⊥	-3			-	3	°	
			Positon	ΔX,Y,Z	-		-80	-	80	μm
	Differential efficiency			η	$\frac{20\text{mW}}{I_{\text{op}}(30\text{mW}) - I_{\text{op}}(10\text{mW})}$		0.3	0.55	0.8	mW/mA
Monitor Photodiode	Sensitivity			S	V _R =15V		-	10	-	μA/mW
	Dark current			I _D			-	-	150	nA
	Terminal capacitance			C _t			-	8	-	pF
Photodiode for signal detection	Reverse voltage			V _R	I _R =10μA	A,B	15	-	-	V
	Dark current			I _d	V _R =15V	A,B	-	-	20	nA
	Terminal capacitance			C _t	V _R =15V,f=1MHz	A	0.6	2.8	5	pF
						B	0.8	3	5.4	
	Short circuit current *4			I _{sc}	E _v =1000L _x *5	A	85	170	270	nA
						B	260	460	670	
	Response time *6			t _r ,t _f	V _R =15V,R _L =180Ω	A,B	-	10	140	ns

*1 Output power form LD chip

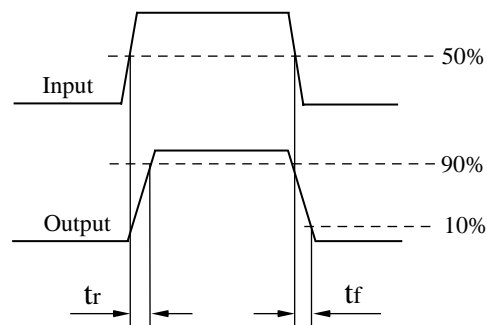
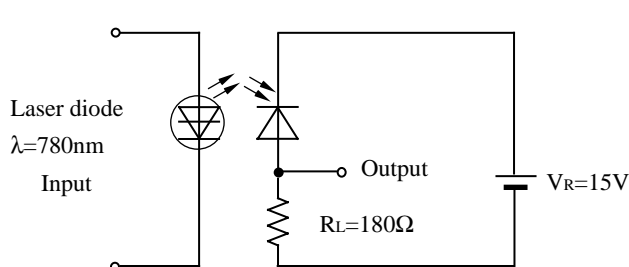
*2 Oscillation mode, transverse single mode

*3 An angle for 50% of the peak intensity (full angle at half maximum).

*4 Values in each element. Elements other than subject elements shall be measured while the anode and the cathode are short-circuited to each other

*5 Illumination intensity by CIE standard light (Tungsten lamp)

*6 Measuring method is shown below

*7 Applicable divisions correspond to pattern segment No.

D1	D2	D3	D4
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Segment No.

D2,D3 A

D1,D4 B

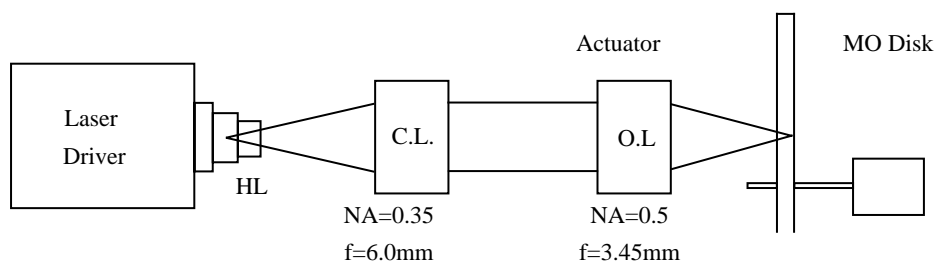
LT0H12M

■ Electro-optical Characteristics *1

(Tc=25°C)

Parameter	Condition	MIN	TYP	MAX	Units
Focus error signal offsetting *2	Laser output 4.2mW	-20	-12	-4	%
Lead-in for focus error signal *3		-	90	-	μm
Radial offsetting *4		-10	-	10	%
FES Output amplitude *5		2.4	3.9	5.0	μA p-p
RES Output amplitude *5		2.5	3.3	4.1	μA p-p

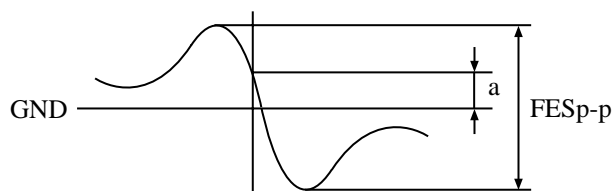
*1 Measuring method is shown below.



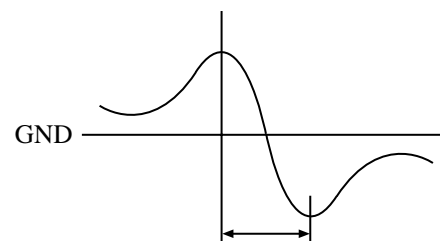
* Distance between C.L-O.L: 27mm C.L: Collimator lens O.L: Objective lens

Measuring method of electro-optical characteristics

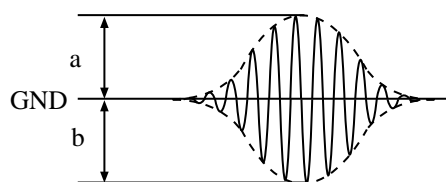
*2 FES output (a)/FESp-p at Maximum point of the FES output amplitude



*3



*4 $(a - b) / 2 (a + b)$



*5 Values at 4.2mW of the laser output
Both FES output amplitude (D2-D3)
and RES output amplitude (D1-D4) are
p-p values at focusing oscillation

*4 $(a - b) / (a + b)$

