DATASHEET

Technical Data Sheet

Encoder

ECD04T1520F/TB

Features

- Gap size：2.0 mm
- Height：7.55 mm
- Incremental output method
- Digital output (2 ch)
- Built in pull-up resistor
- Resolution ：150 LPI
- Pb free
- Compliance with EU REACH
- Compliance Halogen Free(Br < 900ppm, Cl < 900ppm, Br+Cl < 1500ppm)
- The product itself will remain within RoHS compliant version.

Description

- ECD04T1520F/TB is an optical encoder which use an infrared LED to the light source, through assembly process combine emitting components and detecting photo IC, with a digital output and Variations of resolutions, can be used in a wide range of applications.
-

Applications

- Printer
- Copier
- Facsimile
- Disc drive

 Release Date : Nov.02.2018. Issue No: DRX-0000XXX

Absolute Maximum Ratings (T_A=25˚C)

Parameter		Symbol	Rating	Unit
Input	Forward Current	I_F	40	mA
	Reverse Voltage	V_R	3	V
Output	Supply Voltage	V_{CC}	7	V
Storage Temperature *1		$T_{stg.}$	-40 ~ +85	°C
Operating Temperature *1		$T_{opr.}$	0~ +85	°C
Soldering Temperature *2		$T_{sol.}$	260	°C

Notes:

*1. No icebound or dew

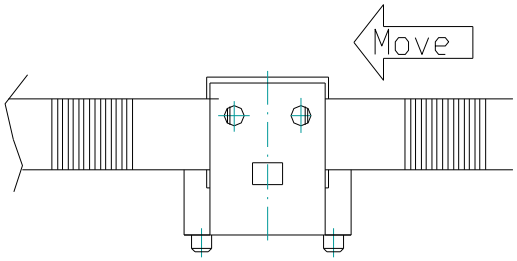
*2. For max 5 sec. At the position of 1 mm from the resin edge

Electro-Optical Characteristics (T_A=25˚C)

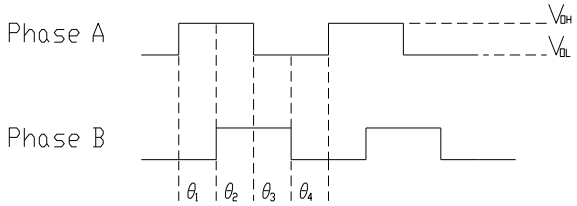
Parameter			Symbol	Min.	Typ.	Max.	Unit	Condition
LED Input	Forward Voltage		V_F	--	1.6	--	V	I_F=20 mA
	Peak Wavelength		λ_P	--	850	--	nm	I_F=20 mA
Operating supply voltage range			V_{CC}	2.7	5.0	5.5	V	--
IC output A-B Phase output	Phase difference	*3*4*6	θ	45	90	135	deg	V_{CC}=2.7 to 5.5 V I_F=20 mA
	Duty ratio	*3*5	Dt	30	50	70	%	
	High level output voltage	*3*4	V_{OH}	Vcc×0.8	--	--	V	
	Low level output voltage	*3*4	V_{OL}	--	--	0.4	V	
Maximum Response frequency			f_{max}	--	--	60	kHz	

Notes:

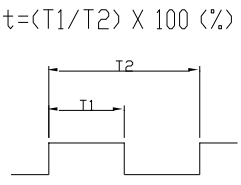
*3. Direction of scale movement



*4. Output waveform of *3



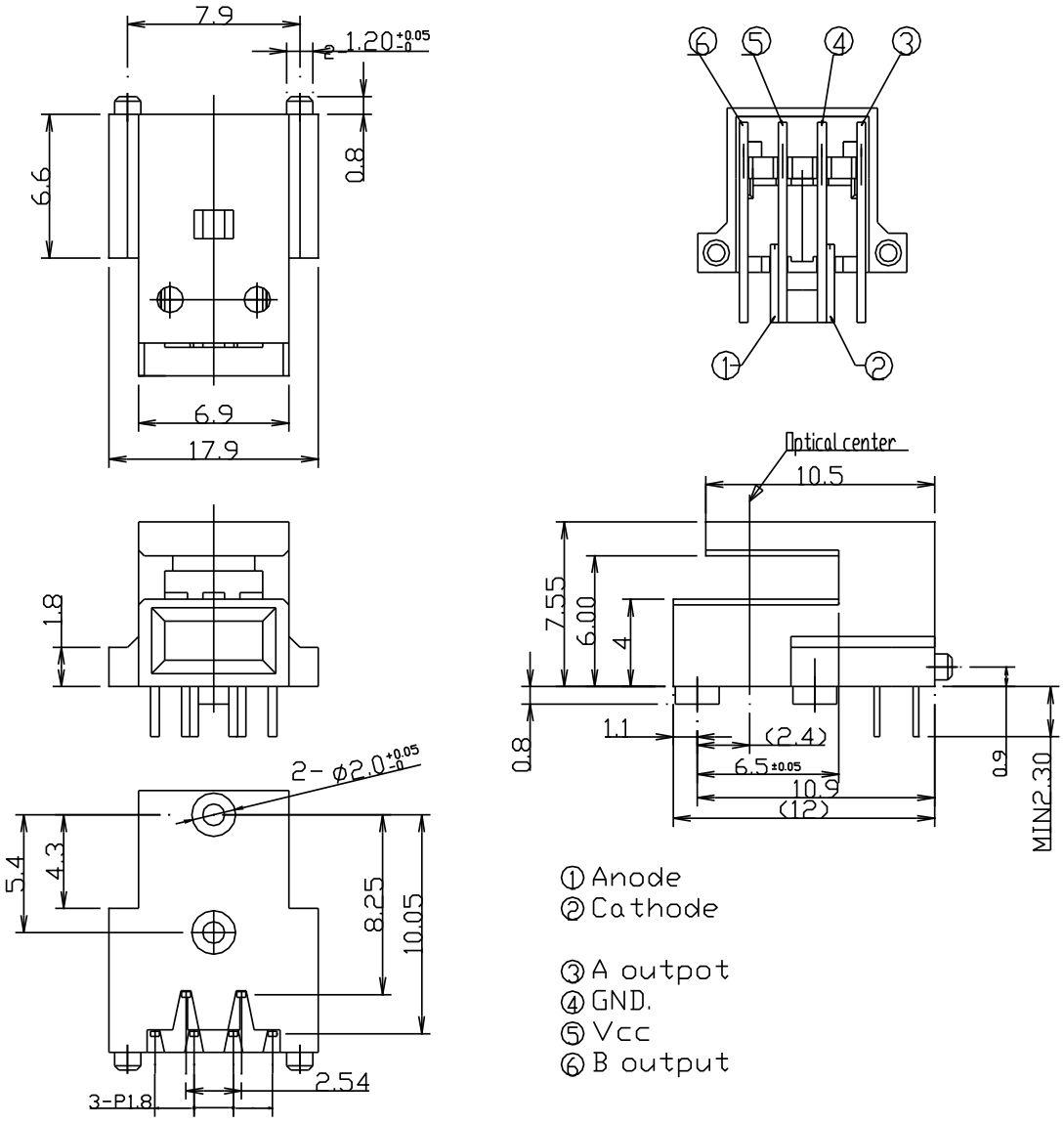
*5. Duty ratio (Dt)



*6. No reverse in phase difference

 Release Date : Nov.02.2018. Issue No: DRX-0000XXX

Package Dimension

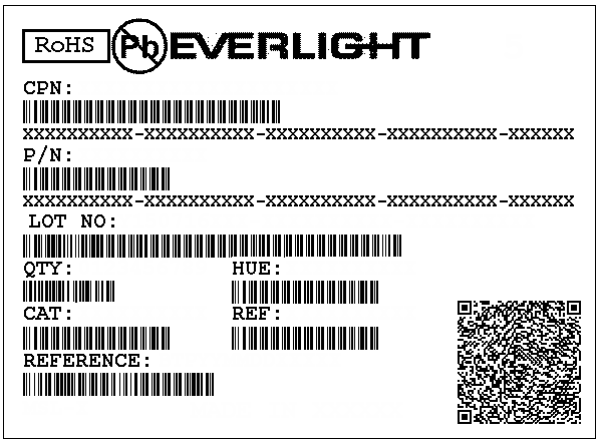


Dimensions are in millimeters.

1. Tolerances unless mentioned are ± 0.30 mm.
2. Do not handle the device by the lens. Incorrect force applied to the lens may lead to the failure of devices.

 Release Date : Nov.02.2018. Issue No: DRX-0000XXX

Label Form Specification



- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- X: Month
- Reference: Identify Label Number

Disclaimer

1. EVERLIGHT reserves the right(s) on the adjustment of product material mix for the specification.
2. The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
4. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from the use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
5. These specification sheets include materials protected under copyright of EVERLIGHT. Reproduction in any form is prohibited without obtaining EVERLIGHT's prior consent.
6. This product is not intended to be used for military, aircraft, automotive, medical, life sustaining or life saving applications or any other application which can result in human injury or death. Please contact authorized Everlight sales agent for special application request.

EVERLIGHT ELECTRONICS CO., LTD. *Tel: 886-2-2685-6688*
Office: No 6-8, Zhonghua Rd., Shulin Dist., *Fax: 886-2-2685-6897*

 Release Date : Nov.02.2018. Issue No: DRX-0000XXX