

D系列 TOF相机  
快速操作指南



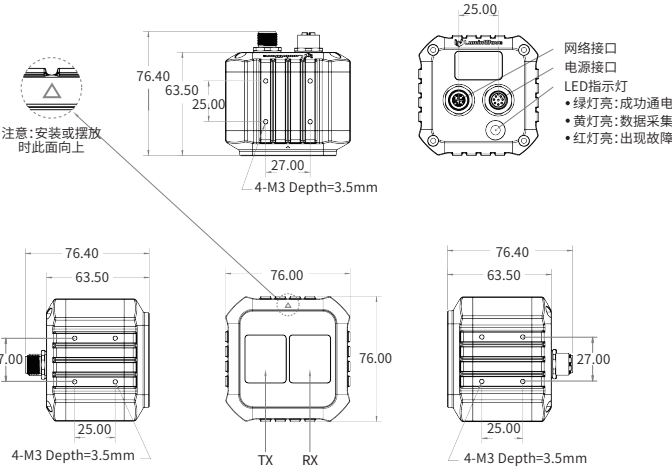
- ◆ 感谢您购买本产品，请妥善保管本指南以供查询使用。
- ◆ 本快速操作指南主要包含D系列TOF相机的基本信息、快速使用及装箱清单。
- ◆ 在使用设备之前，请确保您已阅读并理解了本指南的内容。
- ◆ 为了保障产品的正确安全使用，请通读本指南，特别要留意**激光安全**、**注意事项**两节的内容。
- ◆ 如需了解更多产品信息，需要技术支持，请访问官网 (www.luminwave.com) 或联系相关技术&销售人员。

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■ 结构尺寸



■ 产品接口

网络接口：8pin \* M12 X-code, 接口定义如下

	设备PIN	描 述
	1	td0p
	2	td0n
	3	td1p
	4	td1n
	5	td3p
	6	td3n
	7	td2n
	8	td2p

电源接口：8pin \* M12 A-code, 接口定义及对应线束颜色如下

	设备PIN	线缆颜色*	描 述
	1	黑	P_GND 电源地线
	2	红	VIN DC 12~24V
	3	棕	485-A
	4	绿	485-B
	5	白	EXT_TRIGGER 外部触发输入(3.3-24V)
	6	黄	NC
	7	黑	S_GND 信号地线
	8	蓝	IP_RESET 恢复出厂设置

\*电源线为独立配件，需单独购买

■ 规格参数

	参 数	LWP-D302
	工作原理	TOF(Time-of-flight) 深度相机
	传感器	Sony IMX570
	激光器	940nm VCSEL*2
	工作距离	0.4m~5m
	测距精度	<1% (@2m≤5mm)
	视场角 (H x V)	70° x 50°
	分辨率	640 x 480dpi
	帧率	Max.30fps
	人眼安全	Class 1
功能	HDR功能	支持 HDR 功能
	曝光时间	支持曝光时间调整
	滤波器	支持多种滤波器设置
	输出数据类型	深度图、IR图、点云
供电	供电	12~24V DC
	功耗	<10W
	网络接口	航空插头: 8 pin*M12 X-code
	电源接口	航空插头: 8 pin*M12 A-code
物理	尺寸 (L x W x H)*	76mm x 63.5mm x 76mm
	重量	411g
	工作温度	-20°C~50°C
	存储温度	-30°C~70°C
	防护等级	IP67
	操作系统	Window 10及以上 / Linux

\*设备主体尺寸

■ 装箱清单

打开产品包装后，请确认D系列TOF相机是否完好，请对照以下清单确认配件是否齐全，若有缺失或损坏，请尽快联系销售人员。

- D系列 TOF相机x1
- 零件包x1
- 网线x1
- 快操说明书x1
- 电源线x1
- 合格证x1

**注：**标配1.5m网线和电源线，5m网线和电源线需单独购买，购买型号如下，详细信息请联系销售人员获取。

网线LWA-CME1232-05: 5m M12 8pin 航插转RJ45千兆网线

电源线LWA-CFP1231-05: 5m M12 8pin 航插电源线

■ 快速使用

- 1· 使用前请取下光窗保护膜
- 2· 通过千兆网线将TOF相机与电脑端相连
- 3· 通过电源线及电源适配器给TOF相机提供12V、5A的电源
- 4· LED指示灯绿灯亮，显示成功通电后进行网络配置
- 5· TOF相机默认IP地址为192.168.1.200，可通过上位机软件LuminViewD更改默认IP地址
- 6· 电脑端IP地址需要与TOF相机设置在同一网段
- 7· 电脑端子网掩码设置为255.255.255.0
- 8· 在Window 10及以上环境下运行上位机LuminViewD，扫描并连接TOF相机
- 9· 按照LuminViewD和SDK使用说明，开始使用TOF相机

■ 软件获取

配套软件LuminViewD和SDK，获取方式如下：

方式一：访问洛微科技官网www.luminwave.com下载

方式二：联系销售人员获取

■ 激光安全

本产品激光安全等级符合IEC 60825-1:2014标准，请遵循相应的激光安全指示，使用规定以外的控制或调整或执行程序可能导致辐射伤害。

本产品符合21 CFR 1040.10 和 1040.11 标准，除 2019 年 5 月 8 日颁发的第 56 号激光公告 (Laser Notice No.56) 所述之偏差事项 (IEC 60825-1 第三版) 外。



■ 注意事项

- 1· 使用设备前请务必取下光窗保护膜；
- 2· 请勿损坏或去除产品上的标签；
- 3· 请勿用手触摸光窗，以免光窗沾上指印或污物；
- 4· 请避免用坚硬或锋利物体接触光窗，以免光窗产生划痕；
- 5· 请避免在带电状态下插拔网线及电源线，以免造成产品损坏；
- 6· 未经洛微科技书面同意，禁止拆卸产品；
- 7· 请勿在任何存在潜在爆燃性空气的区域使用产品；

■ 责任声明

- 1· 在法律允许的最大范围内，本指南所描述的产品按照现状提供，可能存在瑕疵、错误或故障，本公司不提供任何形式的明示或默示保证，包括但不限于适销性、质量满意度、适合特定目的、不侵犯第三方权利等保证；亦不对使用本指南或使用本公司产品导致的任何特殊、附带、偶然或间接的损害进行赔偿，包括但不限于商业利润损失、数据或文档丢失产生的损失。
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- 4· 如本说明书内容与适用的法律相冲突，则以法律规定为准。

# D Series TOF Cameras

## Quick Operation Guide



- ◆ Thank you for purchasing this product and please keep this guide for your reference.
- ◆ This Quick Operation Guide contains basic information about the D-Series TOF cameras, quick operation instructions and a packing list.
- ◆ Please make sure you have read and understood the contents of this guide before using the equipment.
- ◆ To ensure proper and safe use of the product, please read through this guide, paying particular attention to the sections on laser safety and precautions.
- ◆ For more product information and technical support, please visit the website (www.luminwave.com) or contact the relevant technical & sales staff.

### Hangzhou LuminWave Technology Co., Ltd

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Web: www.luminwave.com

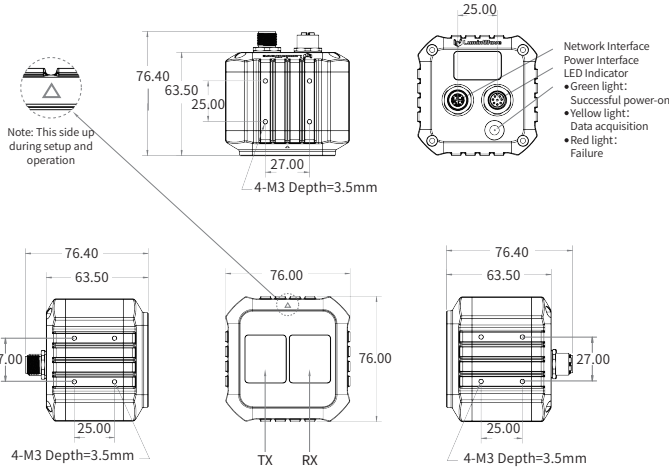
Tel: +86 0571 8519 3787

Mail: sales@luminwave.com



Made in CHINA

### Structural Dimensions



### Connectors

**Network connector:** 8pin \* M12 X-code, pin definition as follows

	Device PIN	Description
	1	td0p
	2	td0n
	3	td1p
	4	td1n
	5	td3p
	6	td3n
	7	td2n
	8	td2p

**Power connector:** 8pin \* M12 A-code, pin definition & corresponding wire color as follows

	Device PIN	Cable Color*	Description
	1	Black	P_GND Power ground
	2	Red	VIN DC 12V
	3	Brown	485-A
	4	Green	485-B
	5	White	EXT_TRIGGER External trigger input (3.3-24V)
	6	Yellow	NC
	7	Black	S_GND Signal ground
	8	Blue	IP_RESET Restore factory settings

\*Power supply cable is a separate accessory and must be purchased separately

### Technical Specifications

Parameters		LWP-D302
Operating Principle		TOF (Time-of-flight) Depth Camera
Sensor		Sony IMX570
Laser		940nm VCSEL*2
Working Distance		0.4m~5m
Ranging Accuracy		<1% (@2m≤5mm)
Field of View (H x V)		70° x 50°
Resolution		640 x 480dpi
Frame Rate		Max.30fps
Human Eye Safety		Class 1
Function	HDR Function	Supports HDR function
	Exposure Time	Supports exposure time adjustment
	Filter	Supports multiple filter settings
	Output Data Type	Depth map, IR map, point cloud
Power supply	Power supply	12V DC
	Power Consumption	<10W
	Network Interface	Aviation plug:8 pin*M12 X-code
	Power Interface	Aviation plug:8 pin*M12 A-code
Physical	Dimensions (L x W x H)*	76mm x 63.5mm x 76mm
	Weight	411g
	Operating Temperature	-20°C~50°C
	Storage Temperature	-30°C~70°C
	Protection class	IP67
Operating System		Window 10 and above / Linux

\*Dimensions of the main body of the device

### Packing List

After opening the package, please make sure that the D series TOF camera is intact, please check the following list to make sure that the accessories are complete, if there is any missing or damag, please contact the sales staff as soon as possible.

- D series TOF camera x 1
- Network Cable x 1
- Power Cable x 1
- Parts kit x 1
- Quick Operation Guide x 1
- Certificate of Conformity x 1

**Note:** We supply 1.5m Network cable and power cord. 5m Network cable and power cord need to be purchased separately, the specific models are as follows, please contact the sales staff for more information.

Network cable **LWA-CME1232-05**: 5m M12 8pin RJ45 Gigabit Ethernet cable.

Power cord **LWA-CFP1231-05**: 5m M12 8pin aerial plug-in power cord.

### Quick Use

- 1· Remove the protective film from the optical window before use.
- 2· Connect the TOF camera to the computer via a Gigabit Ethernet cable.
- 3· Provide 12V, 5A power to the TOF camera through the power cable and power adapter.
- 4· The LED indicator lights up green to show the successful power-on and network configuration.
- 5· The default IP address of TOF camera is 192.168.1.200, you can change the default IP address through the software LuminViewD.
- 6· The IP address of the computer needs to be set in the same network segment with the TOF camera.
- 7· The subnet mask of the computer is set to 255.255.255.0
- 8· Run the LuminViewD software in Window 10 and above environment, scan and connect to the TOF camera.
- 9· Follow the instructions of LuminViewD software and SDK to start using TOF camera.

### Get Software

The software LuminViewD and SDK, can be obtained in the following ways:

Way 1: Visit the official website of LuminWave Technology [www.luminwave.com](http://www.luminwave.com)

Way 2: Contact sales

### Laser Safety

This product has a laser safety rating in accordance with IEC 60825-1:2014. Please follow the appropriate laser safety instructions, use of controls or adjustments or implementation of procedures other than specified in this operation guide may result in radiation injury.

This product complies with 21 CFR 1040.10 and 1040.11, except as described in Laser Notice No. 56, issued on 8 May 2019 (IEC 60825-1 3rd edition).



### Cautions

- 1· Be sure to remove the protection film on the optical window before using the device.
- 2· Do not damage or remove the labels on the product.
- 3· Do not touch the optical window with your hands to avoid fingerprints or dirt on the window.
- 4· Avoid touching the optical window with hard or sharp objects to avoid scratches on the window.
- 5· Avoid plugging and unplugging the network cable and power cord during the working status, so as not to cause damage to the product.
- 6· It is prohibited to disassemble the product without the written permission from LuminWave Tech.
- 7· Do not use the product in any area where potentially explosive atmospheres exist.

### Disclaimer of Liability

- 1· To the fullest extent permitted by law, the products described in this guide are provided "as is" and may contain defects, errors or failures, and the company disclaims all warranties of any kind, either express or implied, including, but not limited to, the warranties of merchantability, satisfactory quality, fitness for a particular purpose, and non-infringement of third-party rights; and shall not be liable for any special, incidental, occasional or consequential damages arising from the use of the guide or the use of the company's products. nor shall it be liable for any special, incidental, consequential or indirect damages arising out of the use of this guide or the use of the company's products, including, but not limited to, damages for loss of business profits, loss of data or documentation.
- 2· If you connect the product to the Internet at your own risk, including but not limited to the product may be subjected to network attacks, hacker attacks, virus infection, etc., the company will not be responsible for the product work abnormality, information leakage and other problems caused by the product, but the company will provide you with technical support for the product.
- 3· When using this product, please strictly follow the applicable laws. If this product is used to infringe the rights of third parties or for other improper purposes, the company shall not be liable for any responsibility.
- 4· In case of conflict between the contents of this manual and the applicable laws, the provisions of the laws shall prevail.