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OPT-HP10-LQLTC-110 Bi-Telecentric Liquid Lens

Lens module specifications

Focus tunable lens (Optotune)	Model	EL-12-30-TC-VIS-16D		
	Focal power	-1.68	+2.29	dpt
Working distance		115.2	104.8	mm
Magnification		1.0		X
F/# / NA		7.0 / 0.07124		variable
Image MTF30 (at 0 dpt)		130		lp/mm
Maximum sensor format		1.1”		inch
Image circle (Φ)		18.4		mm
FoV (at max sensor format) Ø		18.4		mm
Optical leverage		2.62		mm/dpt
Telecentricity		0.10°		°
Optical Distortion		<0.1%		%
Wavelength range		Visible		nm
Lifecycles (10-90% sinusoidal)		>1‘000‘000’000		cycles
Mount		C		
Dimension (Φ x L)		47.00 x 146.84		mm

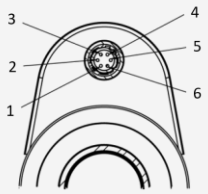
Focus tunable lens specifications

Focal power range (@30°C)[3]	-6 to +10	dpt
Wavefront error (at 525 nm & 0 mA) Optical axis vertical / horizontal	<0.15/<0.23	λRMS
Operating temperature	-20 to +65	°C
Storage temperature	-40 to +85	°C
Temperature compensation & smart step	Yes	

Electrical specifications

Control current (nominal)	-250 to +250	mA
Absolute max. control current	-300 to 300	mA
Power consumption	0 to 940 (nominal)	mW
Motor coil resistance @ 25°C	15	Ω
Absolute maximum voltage (coil)	6	V
Absolute maximum voltage (memory & sensor)	4	V

Hirose connector HR10G-7R-6SB	Function	Value
Pin 1	GPIO Trigger	-
Pin 2	Analog In	0-10V
Pin 3	UART Tx / I²C SCL	TTL
Pin 4	UART Rx / I²C SDA	TTL
Pin 5	GND	-
Pin 6	Vcc	5-24V



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Controller

This lens features Optotune's embedded controller ECC-1C, which features digital communication via UART and I2C as well as an analog 0-10V interface. The lens can be either connected directly to a compatible camera (and controlled through the camera's GenICam interface) or to a PC using Optotune's UART to USB cable (P/N 150-349-00).

More information on controllers: https://www.optotune.com/controllers

Mechanical drawings

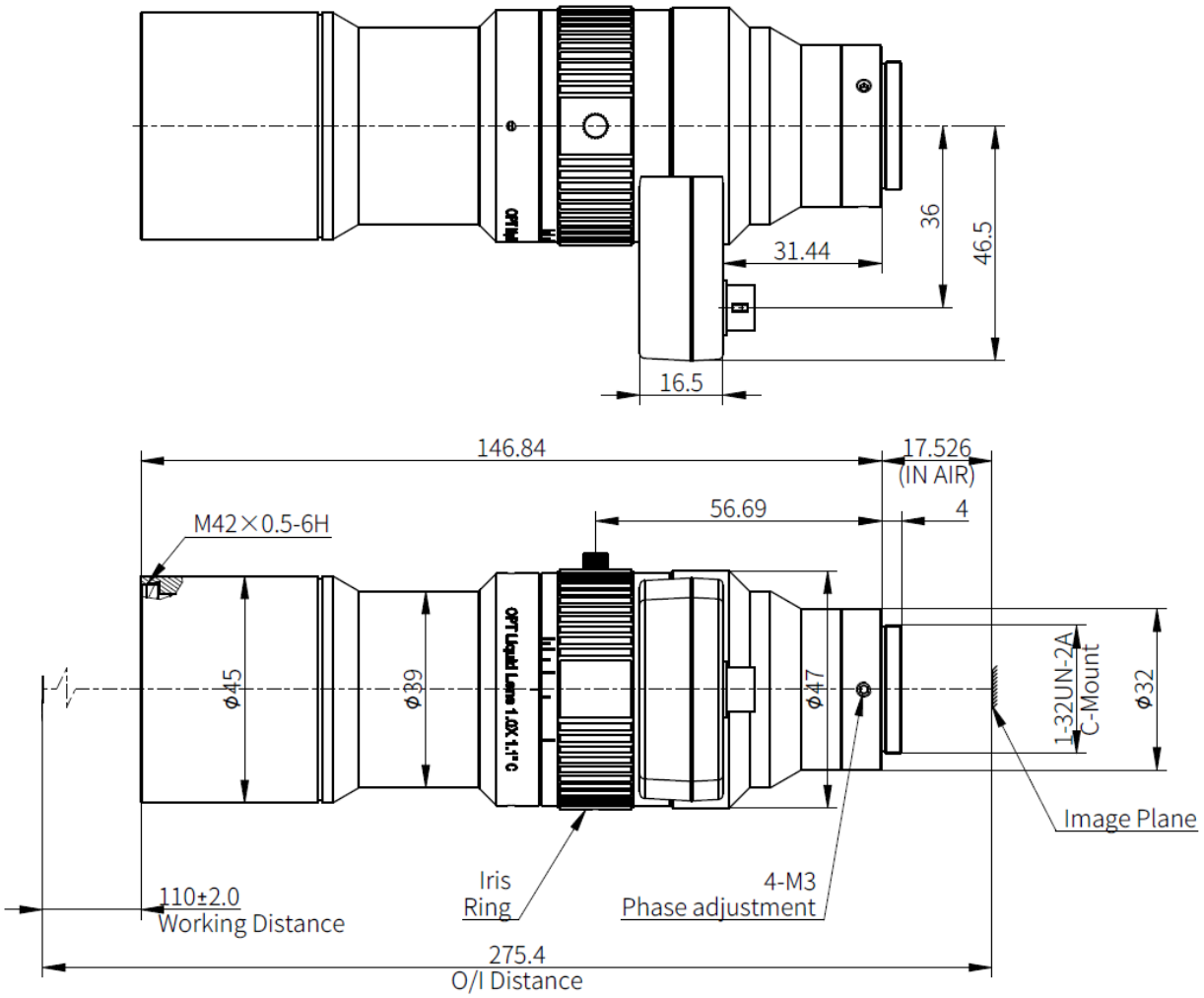

Figure 1: Mechanical drawing of the OPT-HP10-LQLTC-110

For more information on optical, mechanical and electrical parameters, please contact sales@optotune.com

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