



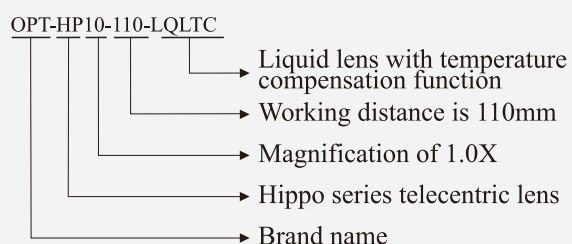
Hippo Series Liquid Telecentric Lens New



Product Features

- **High resolution**
 Maximum resolution of 145lp/mm, low distortion, compatible with cameras up to 1.1" sensor size, and magnification options.
- **Fast focusing**
 The fastest response time is 3ms, and the image is stabilized within 10ms. Almost instantaneous focusing.
- **Repeatability Stability**
 Repeatability adjustment accuracy up to 0.01dpt.
- **Temperature compensation function**
 Integrated liquid lens controller, its built-in temperature sensor can read the temperature in real time, in order to instantly compensate for temperature changes brought about by the change of optical power.
- **Eliminate parallax**
 Telecentric optical path design, high telecentricity.

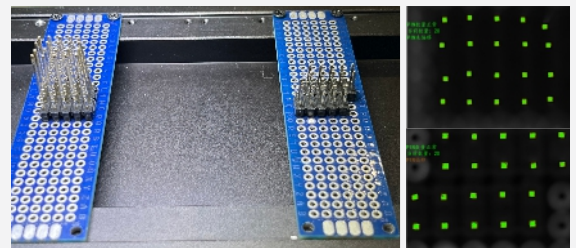
Selection Guide



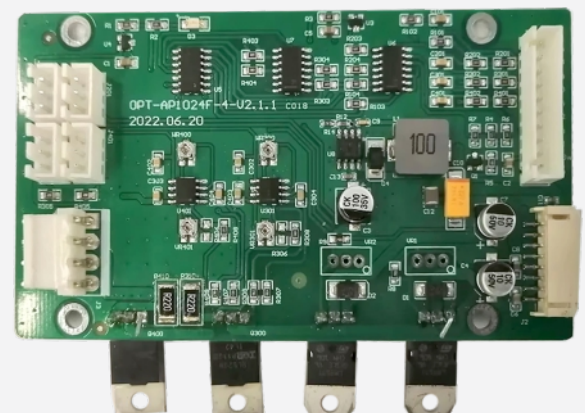
Application Cases



Information extraction and recognition of parcels of different shapes



Detect the number and defects of pins of different heights



Electronic component testing



Technology Introduction

The Hippo series liquid telecentric lenses utilize a high precision telecentric optical design. Integrated liquid lens and controller. It enables fast and accurate electronic focusing, providing superior image performance and a fast autofocus solution. The telecentric optical path design makes it more accurate when focusing on workpieces of different heights. Combined with the Smart3 it enables the active focus control required for autofocus solutions.

The principle of the liquid lens is that a layer of elastic polymer hermetically seals the optical fluid in a container, and the curvature of the liquid lens is varied by adjusting the electric current so that the driver applies different pressures to the container, thus adapting it to different working distances.

OPT liquid telecentric lens response speed of up to milliseconds, to achieve fast focusing, can solve the problem caused by different working distance, while eliminating parallax, reducing the lens movement and debugging time; through the integration of liquid lens controller, to provide temperature compensation function, reduce component heating, environmental temperature changes on the interference of the imaging effect, so as to make the imaging more stable. Provide a good foundation for efficient image processing. Application areas include: 3C electronics, new energy, lithium-ion battery, printing, food and medicine, and automation equipment.

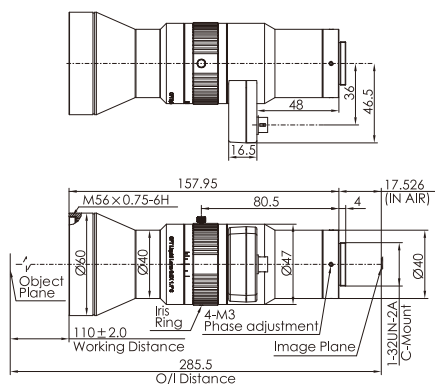
Model Table

Model	OPT-HP05-110-LQLTC	OPT-HP10-110-LQLTC	OPT-HP20-65-LQLTC	OPT-HP40-65-LQLTC
Magnification	0.5X	1.0X	2.0X	4.0X
Aperture	F6.5 ~ F44	F7.0 ~ F62	F7.0 ~ F62	F12 ~ F124
Sensor $\varnothing$ (mm)	18.4(1.1")	18.4(1.1")	18.4(1.1")	18.4(1.1")
Pixel size(μ m)	3.45	3.85	3.85	6.25
Distortion	<0.2%	<0.1%	<0.1%	<0.1%
Working distance (mm)	110 $\pm$ 2	110 $\pm$ 2	65 $\pm$ 2	65 $\pm$ 2
Telecentricity	0.10°	0.10°	0.10°	0.10°
Focal power at 0 mA (25°C, typical) (dpt)	-1 ~ +2	-1 ~ +2	-1 ~ +2	-1 ~ +2
Digital I/O	Hirose HR10G-7R-6SB(73)	Hirose HR10G-7R-6SB(73)	Hirose HR10G-7R-6SB(73)	Hirose HR10G-7R-6SB(73)
Focal power range (25°C, $\pm$ 250 mA)(dpt)	-6 ~ +10	-6 ~ +10	-6 ~ +10	-6 ~ +10
Image MTF30 (at 0 dpt) (lp/mm)	145	130	130	80
Field of View $\varnothing$ (mm)	36.8	18.4	9.2	4.6
Temperature compensation	Yes	Yes	Yes	Yes
Depth of Field (mm)	2.15	0.58	0.14	0.06

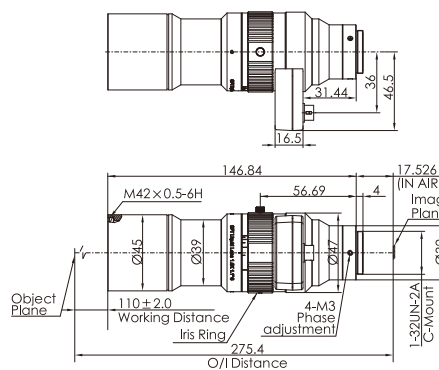


Dimensions (mm)

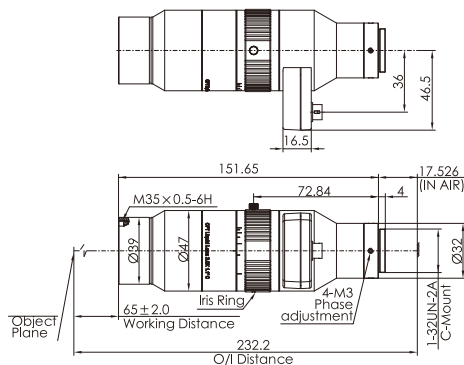
1.OPT-HP05-110-LQLTC



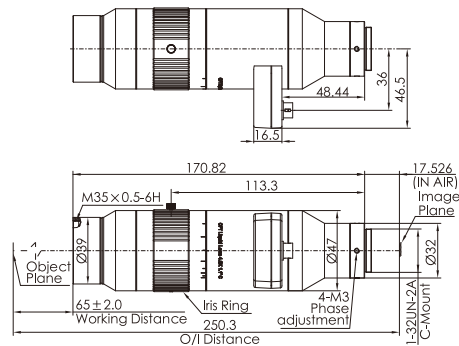
2.OPT-HP10-110-LQLTC



3.OPT-HP20-65-LQLTC



4.OPT-HP40-65-LQLTC



System Configuration

