

# Mini-PHIRE™

## KEY FEATURES

- ❖ Fully supports base Camera Link™ cameras/frame grabbers
- ❖ Direct plug – no electrical cable needed
- ❖ Broad bandwidth – supporting 24 bits image data at 85 MHz pixel clock
- ❖ Transparent operation – plug and play with no changes required for camera and/or frame grabber
- ❖ Standard LC duplex fiber interface
- ❖ Accept wide DC input 5V~24V DC
- ❖ Transmission distance - up to 2 km (standard), longer distance available
- ❖ **PoCL compatible**
- ❖ **Power connector with locking mechanism**
- ❖ **Compact size – 47L x 39W x 20H mm (1.85L x 1.54W x 0.78H inch)**

## TARGET APPLICATIONS

- ❖ Solar panel or glass panel inspection
- ❖ Semiconductor wafer inspection
- ❖ High speed printing inspection
- ❖ High precision surface inspection (e.g. airplane surface or automobile painting)
- ❖ Automated product inspection (e.g. food, drinking or pharmaceutical products)
- ❖ High resolution and real-time analysis for science, sports, automobile tests, and 3-D animation.
- ❖ High precision security surveillance (e.g. border control, airport)
- ❖ Traffic surveillance/control and vehicle license plate reading/recording (e.g. toll booth)
- ❖ Cameras placed in harsh environment (e.g. nuclear plant, steel mill or undersea monitoring)
- ❖ Other Machine Vision Applications

**PHRONTIER™**  
TECHNOLOGIES

## Mini-PHIRE™ Camera Link Fiber Adapter

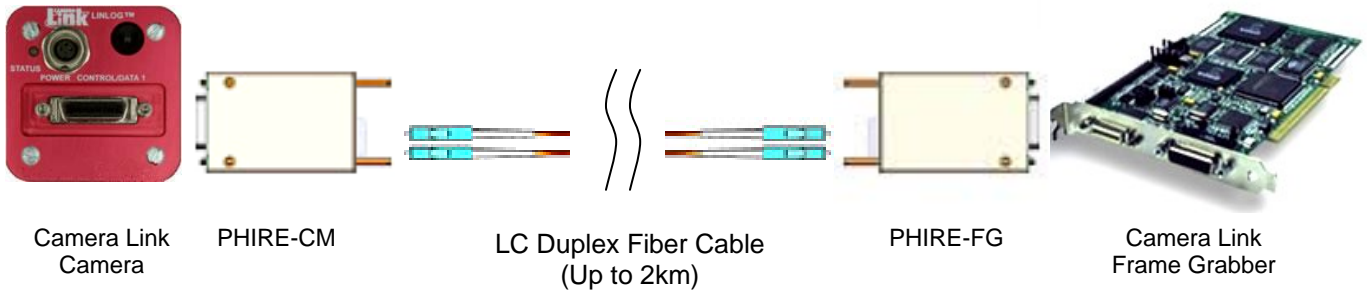
### Base Configuration

PHM-85-M30  
PHM-85-S02



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## TYPICAL SET UP DIAGRAM



## TECHNICAL SPECIFICATIONS

### General Specification

Operating Temperature	Ambient	0 ~ 50 °C
	Case	0 ~ 70 °C
Storage Temperature		-40 ~ 85 °C
Operating Humidity		20 ~ 80% (non-condensing)
Input Voltage		DC 5 ~ 24 V
Supply Current @25 °C	CM	0.14 A @12V
	FG	0.16 A @12V
Typical Power Consumption	CM	1.7 W
	FG	1.9 W
Connector Type		Switchcraft 722A
Approx. Weight (each module)		61 gram

### Camera Link Interface

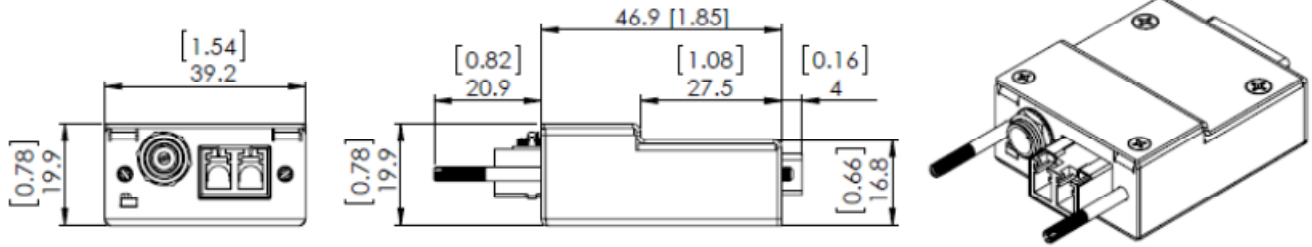
	<b>PHM-85-M30</b> <b>PHM-85-S02</b>
Pixel Clock	20 ~ 85 MHz
Max Image Data Width	24 bits
Transport Bandwidth	2.5 Gb/s

### Optical Interface

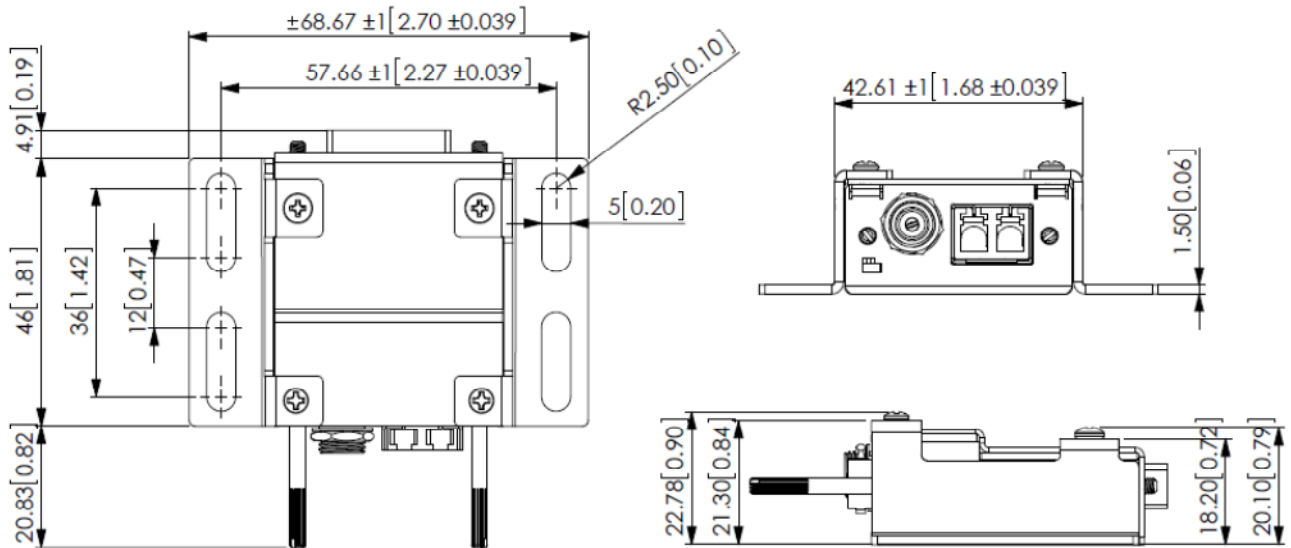
	<b>PHM-85-M30</b>	<b>PHM-85-S02</b>
Operating Wavelength	850 nm	1310 nm
Min Optical Tx Output Power	-7 dBm	-9.5 dBm
Min Optical Rx Power	-14 dBm	-17 dBm
Connector Type	LC duplex	LC duplex
Fiber Type	50/125 μm or 62.5/125 μm MM fibers	9/125 μm SM fibers

## MECHANICAL INFORMATION (mm [inch])

### Module dimensions



### With Mounting Flange Options



## ORDERING INFORMATION

### Standard models

Model #	Data Width	Max. Pixel Clock Rate	Fiber Type & Estimated Link Distance *		Items Provided
<b>PHM-85-M30</b>	24 bits	85MHz	OM3 MM	300 m (1000 ft)	1x Mini-PHIRE-CM 1x Mini-PHIRE-FG 2x 12V DC output
<b>PHM-85-S02</b>	24 bits	85MHz	SM	2 km (1.24 mile)	international wall mount AC/DC adapters (fiber cable not included)

\* Distance depending on fiber type and system design. Extra optical losses in the system will reduce the transmission distance.

# Mini-PHIRE Series

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## Accessory

Part #	Description
<b>618-TRG10R-SW</b>	12V DC international wall mount AC/DC adapter with Switchcraft plug
<b>LC-LC-MD-xxM2</b>	LC to LC duplex 50/125 $\mu$ m OM2 MM fiber. xx = desired length in meters.
<b>LC-LC-MD-xxM3</b>	LC to LC duplex 50/125 $\mu$ m OM3 MM fiber. xx = desired length in meters.
<b>PHM-W</b>	1 pair of mounting flanges including PHM-W-L and PHM-W-R



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