

TECHNICAL DATA SHEET

# GASIR<sup>®</sup> Infrared Lens

## 3.9 mm f/1.1

Umicore's GASIR<sup>®</sup> infrared lenses have been developed for an easy fit with a wide range of camera cores. Our catalog lenses provide a cost-effective solution for high-resolution thermal imaging and sensing applications.

This lens may be offered with other coating variants upon request. Its **lightweight and cost-effective design** makes it a prime choice for your application.

This lens is compatible with **12 μm QVGA** detectors and smaller.



### OPTICAL SPECIFICATIONS


|                        |           |
|------------------------|-----------|
| Effective focal length | 3.9 mm    |
| Radiometric f-number   | f/1.1     |
| Waveband               | 8 – 12 μm |
| Maximum field of view  | 60° × 44° |
| Image circle           | 4.8 mm    |

### Fields of view (HFOV × VFOV)

| Detector pixel pitch | Detector format |           |           |
|----------------------|-----------------|-----------|-----------|
|                      | 80 × 80         | 160 × 120 | 320 × 240 |
| 12 μm                | 14.5° × 14.5°   | 29° × 22° | 60° × 44° |
| 17 μm                | 21° × 21°       | 42° × 31° | —         |

Other detectors may be possible. Please contact us for more information.

### LENS VARIANTS

|                      |  |
|----------------------|--|
| Mechanical variant   | Fixed Focus  |
| Mechanical interface | 12 μm mount M18  |
| Coating option       | HEAR   |
| Part number          | 18092_100  |

### COATING OPTIONS

|      | Transmission* | Lens coatings        | Comments                          |
|------|---------------|----------------------|-----------------------------------|
| HEAR | > 97%         | HEAR on all surfaces | Maximum transmission performance. |

HEAR: High Efficiency Anti-Reflection

Additional specifications are provided in the coatings Technical Data Sheets available on our website.

\*average transmission over waveband



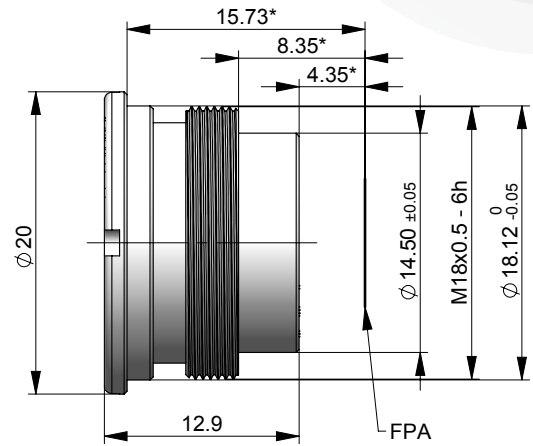
# GASIR® Infrared Lens – 3.9 mm f/1.1

## Fixed Focus

Part Number **HEAR 18092\_100**

|                       |                                  |
|-----------------------|----------------------------------|
| Focus range           | 0.10 m to ∞ with 0.12 mm refocus |
| Operating temperature | -40 °C to +80 °C                 |
| Storage temperature   | -57 °C to +105 °C                |
| Weight                | 5.9 g                            |
| Housing material      | Black anodized aluminium         |

\*dimensions valid with 0.63 mm Si detector window



Electro-Optic Materials is ISO certified: ISO 9001 & ISO 14001

Umicore IR Glass  
Z.A. du Boulais  
35690 Acigné  
FRANCE

Tel: +33 2 99 04 32 26  
Fax: +33 2 99 04 32 29  
[optics@umicore.com](mailto:optics@umicore.com)

Tel: +1 918-673-1650  
Fax: +1 918-673-2121  
[optics.na@umicore.com](mailto:optics.na@umicore.com)

Umicore Optical Materials Inc.  
PO Box 737  
Quapaw, OK 74363  
USA