



TECHNICAL DATA SHEET

GASIR[®] Infrared Lens

8.5 mm f/1.2

Umicore’s GASIR[®] 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 passively athermalized infrared lens is suitable for use with detectors up to 17 μm VGA detectors. Its wide field of view makes it well-suited for thermal imaging applications.



OPTICAL SPECIFICATIONS


| | |
|------------------------|-----------|
| Effective focal length | 8.5 mm |
| Radiometric f-number | f/1.2 |
| Waveband | 8 – 12 μm |
| Maximum field of view | 75° × 56° |
| Image circle | 14.0 mm |

Fields of view (HFOV × VFOV)

| Detector pixel pitch | Detector format | |
|----------------------|-----------------|-----------|
| | 320 × 240 | 640 × 480 |
| 12 μm | 26° × 19.3° | 51° × 38° |
| 17 μm | 36° × 27° | 73° × 54° |
| 25 μm | 53° × 40° | — |

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

LENS VARIANTS

| | | | | |
|----------------------|--|-------------------|------------------------|-----------|
| Mechanical variant | Fixed Focus  | | | |
| Mechanical interface | Standard M25 | | | |
| Coating option | HEAR | iDLC [™] | iDLC [™] -LWP | LWP |
| Part number | 11095_100 | 11121_100 | 20116_100 | 20117_100 |



GASIR[®] Infrared Lens – 8.5 mm f/1.2

COATING OPTIONS

| | Transmission* | Lens coatings | Comments |
|-----------------------------|---------------|---|--|
| HEAR | > 94% | HEAR on all surfaces | Maximum transmission performance. |
| iDLC[™] | > 87% | iDLC [™] on front surface HEAR on all other surfaces | Durable coating for unprotected exterior use. Salt fog rated. |
| iDLC[™]-LWP | > 83% | iDLC [™] on front surface LWP on one internal surface HEAR on all other surfaces | Durable coating, salt fog rated, together with a sunlight filter coating for unprotected exterior use. |
| LWP | > 89% | LWP on one internal surface HEAR on all other surfaces | Sunlight filter coating for use with uncoated detectors. |

HEAR: High Efficiency Anti-Reflection; DLC: Diamond-Like Carbon; LWP: Long Wave Pass
Additional specifications are provided in the coatings Technical Data Sheets available on our website.

*average transmission over waveband

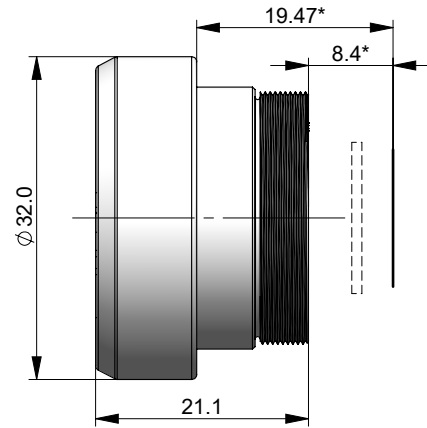


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Fixed Focus

Part Number HEAR 11095_100 iDLC™ 11121_100 iDLC™-LWP 20116_100
LWP 20117_100

| | |
|------------------------------|---|
| Focus range | 0.29 m to ∞ with 0.22 mm refocus |
| Operating temperature | -40 °C to +80 °C |
| Storage temperature | -57 °C to +105 °C |
| Solar radiation | MIL-STD-810G Method 505.5 |
| Vibration | MIL-STD-810E Method 514.4 / procedure I, Cat. 8 |
| Mechanical shock | MIL-E-5400T |
| Sealing | IP67 |
| Weight | 34 g |
| Housing material | Black anodized aluminium |



*dimensions valid with 1.0 mm Ge detector window

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

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