Highlights

- Multiple sensor design (up to 8 heads for 1 box)
- Plug & Play (automatic head detection from the box)
- High temperature resistance for the head up to 180°C (356°F) without cooling
- Multiple spectral ranges covered by one sensor model
- Extended temperature range for LT head up to 1000°C (1832°F)
- Dedicated 5 µm head for measuring of glass
- Laser sighting for 1M/2M sensing heads
- Spot sizes down to 0.5 mm (0.02 in) with Close Focus Lens
- Fast 10 ms response time
- Industrial rugged head cable (PUR): Silicone and Halogen free, resistant against oil, bases, and acids
- Networkable OEM head model (without a box)
- Intrinsically safe sensing heads with dedicated Ex-power supply

MI3 Heads
Datasheet

Measurement Specifications

Temperature Range

LTS02, LTS10, LTH10	-40 to 600°C (-40 to 1112°F)
LTS20, LTF, LTH20	0 to 1000°C (32 to 1832°F)
G5	250 to 1650°C (482 to 3002°F)
2M	250 to 1400°C (482 to 2552°F)
1M	500 to 1800°C (932 to 3272°F)

Spectral Response

LT	8 – 14 µm
G5	5 µm
2M	1.6 µm
1M	1 µm

Optical Resolution[1]

LTS (standard)	2:1, 10:1, 22:1 typ. (21:1 guaranteed)
LTH	10:1, 22:1 typ. (21:1 guaranteed)
LTF (fast)	10:1
G5	10:1
1M, 2M	100:1

Accuracy[2]

LT, G5	± (1% of reading or 1°C) [3, 4]
1M, 2M	± (0.5% of reading + 2°C)

Repeatability

LT, G5	± 0.5% of reading or ± 0.5°C [3]
1M, 2M	± (0.25% of reading + 1°C)

Temperature Coefficient

LT, G5	± 0.05 K / K or ± 0.05% / K of reading[3]
1M, 2M	± 0.01% / K of reading

Response Time[5]

LTS (standard), LTH	130 ms
LTF (fast)	20 ms
G5	130 ms
1M, 2M	10 ms

Emissivity ε	0.100 to 1.100
Transmission	0.100 to 1.000
Signal Processing	Peak hold, valley hold, adjustable up to 998 s variable averaging filter

[1] 90% energy
[2] at ambient temperature 23°C ± 5°C (73°F ±9°F), ε = 1.0, and calibration geometry
[3] whichever is greater
[4] ± 2°C (± 4°F) for target temperatures < 20°C (68°F)
[5] 90% value

General Specifications

Ambient Temperature

LT, G5	-10 to 120°C (14 to 248°F)
LTH	-10 to 180°C (14 to 356°F)
1M, 2M	0 to 120°C (32 to 248°F)
Laser (1M, 2M)	automatic switch off at 65°C (149°F)

Storage Temperature

LTH	-20 to 180°C (-4 to 356°F)
all other models	-20 to 120°C (-4 to 248°F)

Environmental Rating	IP65 (NEMA-4)
EMC	EN 61326-1:2006

Dimensions

LT, G5

1M, 2M
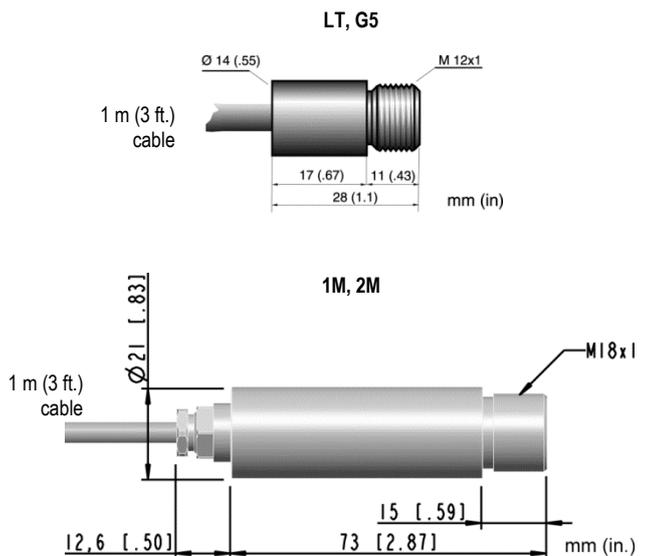
Optical Specifications (90% energy)

D:S = 2:1

| in. | 0 | 5.9 | 11.8 | 15.7 |
| mm | 0 | 150 | 300 | 400 |

0.24 / 6, 3.1 / 78, 5.9 / 150, 7.8 / 200

D:S = 10:1

| in. | 0 | 5.9 | 11.8 | 15.7 |
| mm | 0 | 150 | 300 | 400 |

0.24 / 6, 0.71 / 18, 1.2 / 31, 1.57 / 40

D:S = 22:1

| in. | 0 | 5.9 | 11.8 | 15.7 |
| mm | 0 | 150 | 300 | 400 |

0.24 / 6, 0.4 / 10, 0.6 / 15, 0.71 / 18

SF1   D:S = 100:1

| in. | 0 | 3.94 | 7.87 | 11.8 | 15.7 | 19.7 |
| mm | 0 | 100 | 200 | 300 | 400 | 500 |

0.47 / 12, 0.24 / 6, 0.08 / 2, 0.31 / 8, 0.55 / 14, 0.79 / 20

SF3   D:S = 100:1

| in. | 0 | 39.4 | 78.7 | 90.5 | 118.1 | 157.5 |
| mm | 0 | 1000 | 2000 | 2200 | 3000 | 4000 |

0.47 / 12, 0.51 / 13, 0.79 / 20, 0.87 / 22, 1.18 / 30, 1.65 / 42
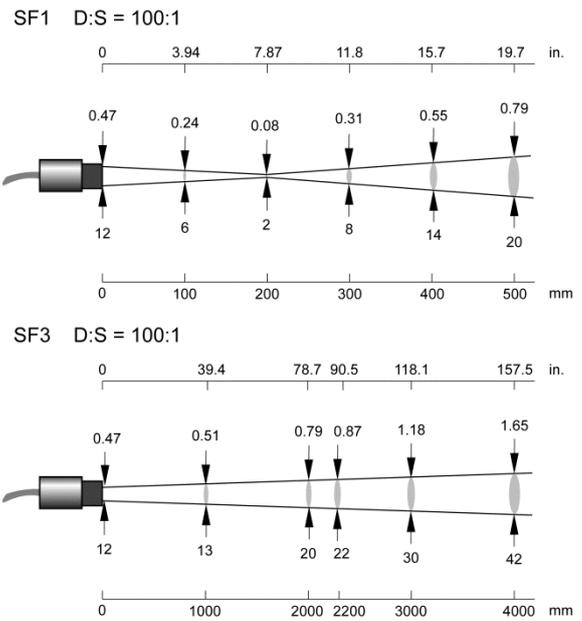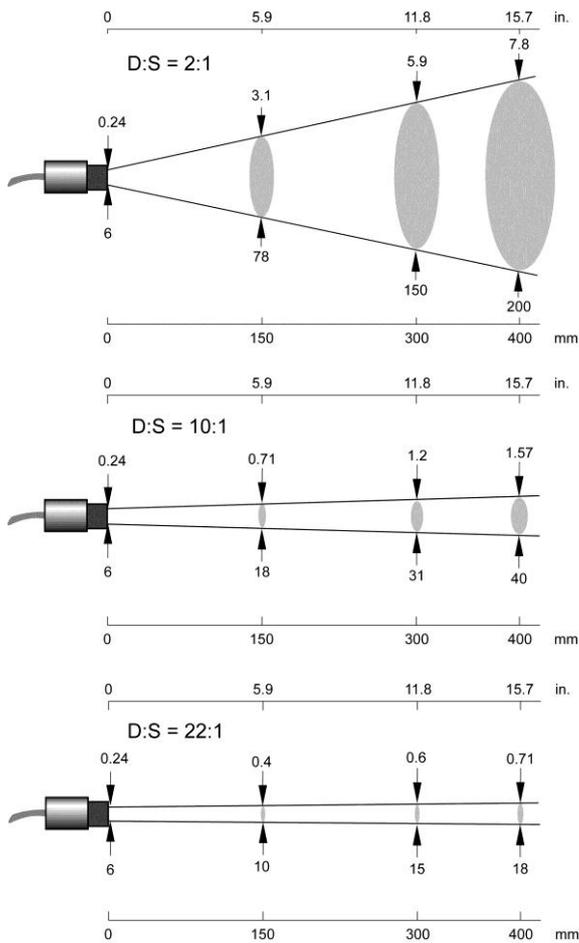
Intrinsic Safety

Intrinsically safe sensing heads (MI3…IS):

II 2G Ex ib IIC T4 Gb (gas)
II 2D Ex ib IIIC T135°C Db (dust)

Ex Power supply (MI3ACIS):

II (2)G [Ex ib Gb] IIB (gas)
II (2)D [Ex ib Db] IIIC (dust)

Accessories

Accessories include items that may be ordered at any time and added on-site:

- Adjustable Bracket (LT, G5: XXXMIACAB / 1M, 2M: XXXMI3100ADJB)
- Fixed Bracket (LT, G5: XXXMIACFB / 1M, 2M: XXXMI3100FB)
- Isolation Kit for Fixed Bracket (1M, 2M: XXXMI3100ISOKIT)
- Air Purge (LT, G5: XXXMIACAJ / 1M, 2M: XXXMI3100AP)
- Air Cooling Jacket (XXXMIACCJ: 0.8 m/2.6 ft, XXXMIACCJ1: 2.8 m/9.2 ft) for ambient temperatures up to 200°C/392°F (LT, G5 only)
- Close Focus Lens (LT, G5: XXXMI3ACCFL)
- Protective Window (LT, G5: XXXMIACPW / 1M, 2M: XXXMI3100PW)

Air Purge Jacket

for LT, G5 heads (XXXMIACAJ)

for 1M, 2M heads (XXXMI3100AP)

Options

Options must be specified at time of order.

- Longer head cable lengths: 3 m, 8 m, 15 m, 30 m (9.8, 26, 49, 98 ft.)
- Water cooled housing (1M, 2M heads)
- Networkable OEM sensing head without the need for a box

Water Cooled Housing (1M, 2M)

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