

X Non-contact thermometry best done
with *INFRATHERM* pyrometers

impac[®]



IS 140 · IGA 140

Highly accurate, fully digital, fast

Pyrometer with focussable optics for non-contact temperature measurements on metals, ceramics, graphite etc. between 300 und 3300°C

- ◆ Temperature ranges between 300 and 3300°C
- ◆ Short response times < 1 ms
optional 500 µs
- ◆ Extremely small spot sizes, min 0.35 mm
- ◆ Built in digital display with temperature indication
- ◆ Optimized thru-lens view finder
or laser targeting light
- ◆ Test current output
- ◆ Housing with precision mounting rail for
safe mounting and accurate alignment
- ◆ Interface RS232 / RS485 switchable
- ◆ Focusable optics



The pyrometers **IS 140** and **IGA 140** are digital, highly accurate pyrometers for non-contact temperature measurement on metals, ceramics, graphite etc. For optimal match of the instrument to the application 3 different focussable optics with extremely small spot sizes are available. The pyrometer parameters can be selected via the integrated key pad, the settings are indicated on the built-in LC-Display. In measuring mode the actual temperature is indicated.

The pyrometers are equipped with RS232 and RS485 serial interfaces (switchable inside the pyrometer). This enables additionally the reading of temperature and pyrometer parameters via the provided *InfraWin* PC-software. If necessary the parameters also can be changed via PC. A laser targeting light or thru-lens view finder for exact alignment of the pyrometer is available.

Typical applications:

- preheating
- annealing
- tempering
- welding
- forging
- hardening
- sintering
- melting
- soldering
- rolling
- brazing
- normalizing

Optics

The series 140 pyrometers are available with 3 different focusable optics. They offer the smallest possible spot size at any distance. The adjustment can be done easily without additional tools with help of the „turn and clamp“ mechanism (one hand). The spot sizes are shown in the following table (all distances are measured from the front of the lens).

The different optics are exchangeable without recalibration of the pyrometer.

For spot sizes between those in the table, values can be found by interpolation.

	Distance a	Spot size M
Optics 1: (distance 130 ... 200 mm)	130 mm	0.35 mm
	160 mm	0.5 mm
	200 mm	0.7 mm
Optics 2: (distance 190 ... 420 mm)	190 mm	0.5 mm
	300 mm	0.8 mm
	420 mm	1.3 mm
Optics 3: (distance 340 ... 4000 mm)	340 mm	0.9 mm
	2000 mm	6.5 mm
	4000 mm	15 mm



Aperture D (depends on the objective distance):
Basic temperature range up to 1500°C: 14 ... 16 mm;
Basic temperature range above 1500°C: 8 ... 9 mm

Reference numbers

Pyrometers (basic instruments are equipped with laser targeting light):

3 875 100	IS 140 MB 14:	550 ... 1400°C	3 875 300	IGA 140 MB 13:	300 ... 1300°C
3 875 120	IS 140 MB 16:	600 ... 1600°C	3 875 320	IGA 140 MB 18:	350 ... 1800°C
3 875 140	IS 140 MB 18:	650 ... 1800°C	3 875 340	IGA 140 MB 25:	450 ... 2500°C
3 875 160	IS 140 MB 25:	750 ... 2500°C	3 875 360	IGA 140 MB 13.5 L:	250 ... 1350°C
3 875 180	IS 140 MB 33:	900 ... 3300°C	3 875 380	IGA 140 MB 20 L:	300 ... 2000°C
3 875 200	IS 140 MB 18 L:	550 ... 1800°C	3 875 400	IGA 140 MB 25 L:	350 ... 2500°C

Optional:

Thru-lens view finder instead of laser targeting light (add **010** to the basic instruments ref. number, e.g. 3 875 110 instead of 3 875 100)

Ordering note:

When ordering please select one focussable optics.

A connection cable is not included in scope of delivery and has to be ordered separately.



Ordering example:

3 875 150 IS 140 with thru-lens view finder, focusable optics 2, temperature range 650 ... 1800°C
3 820 530 connection cable, length 10 m, with 90° connector

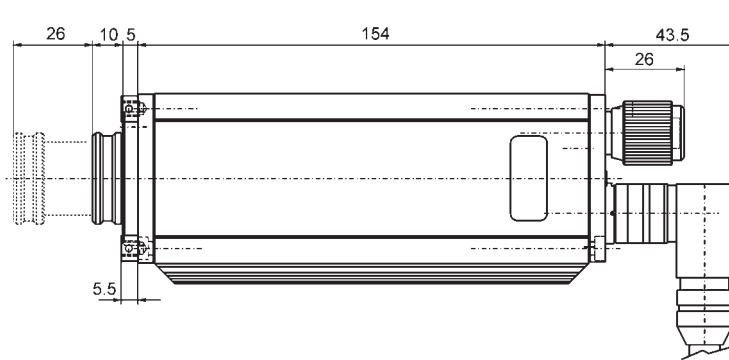
Scope of delivery: Pyrometer with focusable optics, *InfraWin* operating and analyzing software

Accessories:

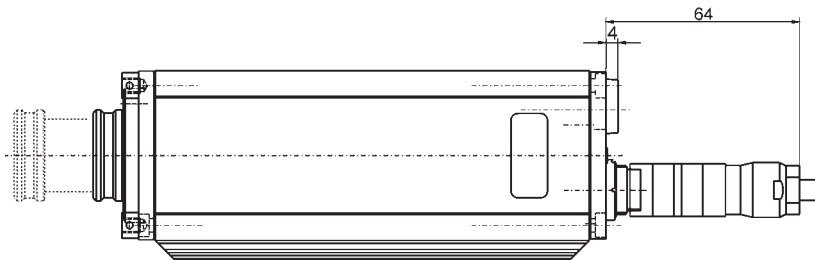
3 820 340	connection cable, length 5 m, 90° connector	3 834 200	ball and socket mounting for cooling jacket
3 820 530	connection cable, length 10 m, 90° connector	3 837 240	cooling plate
3 820 540	connection cable, length 15 m, 90° connector	3 835 280	90° mirror
3 820 830	connection cable, length 20 m, 90° connector	3 843 520	rugged scanner SCA 140, (scanning angle adjustable 0 ... 12°, scanning frequency adjustable 1 ... 5 Hz), with quartz glass window
3 820 840	connection cable, length 25 m, 90° connector	3 835 290	air purge for scanner SCA 140
3 820 550	connection cable, length 30 m, 90° connector	3 852 540	power supply NG 0D for DIN rail mounting; 85 ... 265 V AC ⇒ 24 V DC, 600 mA
3 820 330	connection cable, length 5 m, straight connector	3 852 550	power supply NG 2D, as NG 0D: additionally with 2 limit switches
3 820 500	connection cable, length 10 m, straight connector	3 890 640	LED digital display DA 4000-N
3 820 510	connection cable, length 15 m, straight connector	3 890 650	LED digital display DA 4000: with 2 limit switches
3 820 810	connection cable, length 20 m, straight connector	3 890 560	LED digital display DA 6000-N: with possibility for pyrometer parameter settings for digital
3 820 820	connection cable, length 25 m, straight connector	3 890 520	INFRATHERM pyrometers; RS232 interface
3 820 520	connection cable, length 30 m, straight connector		LED digital display DA 6000; DA 6000-N additional with 2 limit switches and analog input and output
3 820 740	connection cable, length 5 m, straight connector, temperature resistant up to 200°C		
3 820 750	connection cable, length 5 m, 90° connector, temperature resistant up to 200°C		
3 834 280	adjustable mounting angle		
3 834 270	ball and socket mounting		
3 835 230	air purge	3 890 660	IP 65 front cover for LED digital displays
3 837 290	cooling jacket, stainless steel	3 826 500	HT 6000, portable battery driven indicator and instrument for pyrometer parameter setting
3 835 060	air purge for cooling jacket		

Dimensions

Pyrometer with laser targeting light



Pyrometer with thru-lens view finder

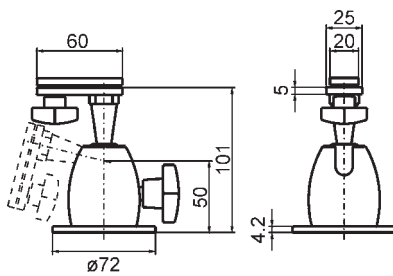


All dimensions in mm

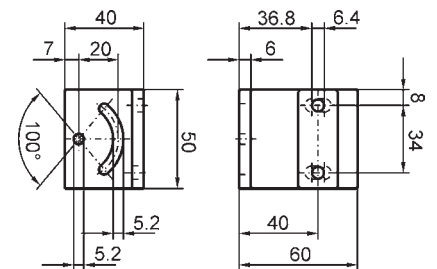
Overview accessories



Ball and socket mounting



mounting angle



Cooling plate



90° mirror



air purge



Stainless steel cooling jacket



Scanner SCA 140 for small angles up to 12°



LED digital display

IMPAC Infrared GmbH
Temperature Measurement

Contika
Hindhøj 82
8382 Hinnerup
Tel 8624 5066

