

# LAND



## CYCLOPS 055 Meltmaster

High precision portable infrared  
thermometers for Liquid Metals



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# CYCLOPS 055 Meltmaster

## Accurate, non-contact, liquid metal temperature measurements

Land **Cyclops 055 Meltmaster** is a dedicated high precision, portable infrared thermometer, designed for accurate measurement of liquid metal temperatures in the range 1000 to 2000 °C / 1832 to 3632 °F.

The measured temperature is displayed in four simultaneous modes including the new, advanced 'Meltmaster' mode.

Accurate sighting is ensured by the clear, wide angle (9°) field of view and small, clearly defined (1/3°) measurement area. Focusing is fixed at 5 m / 16 ft.

Emissivity compensation is provided via the icon-based menu system.

The operating waveband has been carefully chosen to minimise errors due to uncertainty in emissivity and the effects of atmospheric vapour components.

Two models are available - **Cyclops 055** and **Cyclops 055B**. Both provide wired RS232 serial communications. The **Cyclops 055B** also features convenient 'Bluetooth' wireless communications. Ergonomic design allows easy, one-handed operation in hostile environments.

**Significantly reduces the use and cost of disposable 'dip' type thermocouples**

### ● Optics

Through the lens reflex optical system gives a precise definition of the target spot and simultaneous backlit display of user selected values in the viewfinder.

### ● Menu Controls


Simple, easy to use controls to select required mode from the icon based menu.

### ● Trigger

Robust trigger to take and store temperature readings

### ● Connectivity

C055 model offers data logging to optional DL-1000 Datalogger via a wired connection.

 C055B model offers both wired and Bluetooth wireless data logging to DL-1000.

### ● Features

- High accuracy liquid metal temperature measurement
- Advanced 'Meltmaster' measurement mode
- High accuracy and repeatability
- Long term, drift free measurement
- Four simultaneous measurement modes
- Advanced spectral filtering to give enhanced performance
- Digital signal processing
- Output for data logging
- Bluetooth option available
- Range of optional accessories



### ● Multifunction Display

The bright, back-lit external display panel provides an indication of status and configuration of the thermometer together with four simultaneous live measurement modes.

The panel displays a simple icon-driven, language-free menu system navigated via keypad controls.

- Mode selection
- Emissivity
- Window Compensation
- Communication Status
- Battery Status
- Alarm Status

The user highlights the mode to be displayed in the viewfinder.

### ● Benefits

- No contamination, interference or damage to the process or material
- Accurate, reliable and stable temperature measurement to aid product quality control
- Reduce the number of expensive dip thermocouple readings that you take
- Maximize production rates and efficiency
- One-handed operation keeps you safe in hazardous locations
- Proven, rugged casing ensures ability to withstand hostile environments
- Calibrated and traceable to National Standards - your guarantee of measurement accuracy - backed up by a support network which extends around the world

Measuring the temperature of molten metal in a foundry can be a slow and disruptive process. The use of disposable dip thermocouples can be both expensive and hazardous. The new Meltmaster is both fast and accurate, easy to use, and does not contact the liquid metal.



## ● Taking a Measurement

All four processed temperature values are displayed continuously on the graphics panel when the trigger is pressed.

### Meltmaster temperature

An advanced, noise-rejection processing mode which locks-onto the real liquid metal temperature. Updates whilst the trigger is pressed.

### Continuous temperature

0.5s display/serial updates when the trigger is pressed.

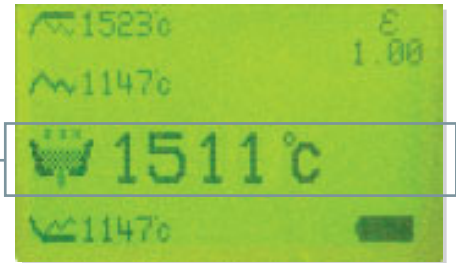
### Peak temperature

Maximum from when trigger pressed.

### Valley temperature

Minimum from when trigger pressed.

The user can select the measurement type, which is also displayed in the viewfinder. Once the trigger is released the measurement is taken. This data can be stored on the optional DL-1000 Data logger, or via wireless connection to an IPAQ.



Measurement Display



Take measurements from a safe distance

## ● Data Logger DL-1000

The Pocket PC based Cyclops DL-1000 Data Logging System provides a fast and simple method for logging temperature readings taken using Land Cyclops portable infrared thermometers, with a data point being logged upon each trigger release.

If an iPAQ is being used, stored readings can then be easily transferred using a docking station to a PC.

The logged data can then be used for further analysis and trending purposes.

Datasheet PDS018 provides further details.

## ● Bluetooth Option

Wireless data logging to Bluetooth-equipped iPAQ (safely in your pocket) or PC/laptop with connections typically over several metres.



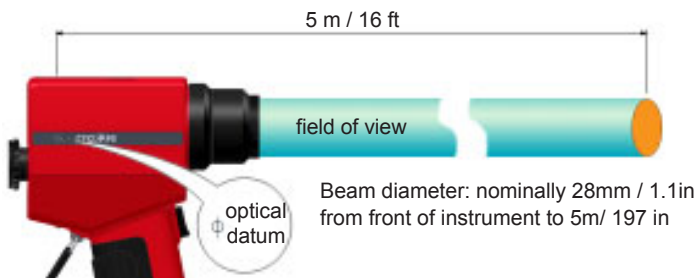
Data logging via Bluetooth iPAQ



Accurate and repeatable readings throughout your plant

## ● Field of View

The 5m/16ft focusing distance ensures non-hazardous measurement for the operator, the field of view enables use in applications with a restricted view or access.



## ● Accessories

A heat resistant jacket is provided as a standard accessory to provide protection against excessive heat and dust.

A waterproof carry case is available as an optional accessory.



Heat resistant jacket



Waterproof carry case

# Specifications - CYCLOPS 055 and CYCLOPS 055B

Measurement range:	1000 to 2000 °C / 1832 to 3632 °F	Response time:	30 ms
Indication:	4-digit LCD in viewfinder; external backlit LCD display	Display update time:	0.5 s
Measuring modes:	Peak, Continuous, Valley and advanced MeltMaster processing functions	Accuracy:	<0.5 % (K) of reading
Data logging:	To iPAQ or laptop/PC running DL-1000v2 software. Wired or wireless Bluetooth connection (C055B only)	Repeatability:	<1 °C / 2 °F
Optical system:	9° field of view; 1/3° measurement area (180:1 to 98 % energy); eyepiece adjustable - 3.75 to +2.5 diopters	Operating temp. range:	0 to 50 °C / 32 to 122 °F
Focusing range:	Fixed Focus, nominally at 5 m / 197 in. from thermometer body datum	Power requirement:	One MN1604/6LR61/PP3 battery
Target size:	Nominally a constant 28 mm / 1.1 in target spot diameter from lens to 5 m / 197 in.	Output:	RS232C. Bluetooth (C055B only)
Spectral response:	Nominally 0.55 µm	Weight:	0.83 kg / 1.8 lb
Emissivity adjustment:	0.10 to 1.20 in 0.01 step graduations	Sealing:	IP40
		Standard accessories:	Lens cap, protection window/filter, battery, wrist strap, heat protection jacket
		Optional accessories:	Data Logger DL-1000, HP iPAQ, rugged waterproof carry case

For further information please contact the appropriate office or visit our web site at: [www.landinst.com](http://www.landinst.com)

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