High precision portable infrared thermometers for Liquid Metals
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 technology enabled. 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 additionally offers data logging to DL-1000 via Bluetooth® wireless technology.

**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® wireless technology (optional)
- Range of optional accessories

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.

**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.
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.

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.

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.

Wire-free communications option using Bluetooth® wireless technology
Wireless data logging to Bluetooth® wireless technology equipped iPAQ (safely in your pocket) or PC/laptop with connections typically over several metres.

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.
## Specifications - CYCLOPS 055 Z5232 and CYCLOPS 055B Z5232

<table>
<thead>
<tr>
<th>Specification</th>
<th>CYCLOPS 055 Z5232</th>
<th>CYCLOPS 055B Z5232</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement range</td>
<td>1000 to 2000 °C / 1832 to 3632 °F</td>
<td>Response time: 30 ms</td>
</tr>
<tr>
<td>Indication</td>
<td>4-digit LCD in viewfinder,</td>
<td>Display update time: 0.5 s</td>
</tr>
<tr>
<td></td>
<td>external backlit LCD display</td>
<td></td>
</tr>
<tr>
<td>Measuring modes</td>
<td>Peak, Continuous, Valley and advanced</td>
<td>Accuracy: &lt;0.5 % (K) of reading</td>
</tr>
<tr>
<td></td>
<td>MetMaster processing functions</td>
<td>Repeatability: &lt;1 °C / 2 °F</td>
</tr>
<tr>
<td>Data logging</td>
<td>To iPAQ or laptop/PC running DL-1000</td>
<td>Operating temp. range: 0 to 50 °C / 32</td>
</tr>
<tr>
<td></td>
<td>002 software. Wired or wireless</td>
<td>to 122 °F</td>
</tr>
<tr>
<td></td>
<td>connection (C055B only) via</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bluetooth® wireless technology</td>
<td>Power requirement: One MN1604/6L961/PP3</td>
</tr>
<tr>
<td>Optical system</td>
<td>9&quot; field of view; 1/3&quot; measurement</td>
<td>Output: RS232C, Bluetooth® wireless</td>
</tr>
<tr>
<td></td>
<td>area (160:1 to 98% energy);</td>
<td>technology (C055B only)</td>
</tr>
<tr>
<td></td>
<td>eyepiece adjustable -3.75 to +2.5</td>
<td>Weight: 0.83 kg / 1.8 lb</td>
</tr>
<tr>
<td></td>
<td>diopeters</td>
<td>Standard accessories: Lens cap,</td>
</tr>
<tr>
<td></td>
<td>Focusing range: Fixed Focus,</td>
<td>protection window/filter, battery,</td>
</tr>
<tr>
<td></td>
<td>nominally at 5 m / 197 in. from</td>
<td>wrist strap, heat protection jacket</td>
</tr>
<tr>
<td></td>
<td>thermomter body datum</td>
<td></td>
</tr>
<tr>
<td>Target size</td>
<td>Nominaly a constant 28 mm / 1.1 in</td>
<td>Optional accessories: Data Logger DL-</td>
</tr>
<tr>
<td></td>
<td>target spot diameter from lens to</td>
<td>1000, HP iPAQ, rugged waterproof carry</td>
</tr>
<tr>
<td></td>
<td>5 m / 197 in.</td>
<td>case</td>
</tr>
<tr>
<td>Spectral response</td>
<td>Normally 0.55 μm</td>
<td></td>
</tr>
<tr>
<td>Emissivity adjustment</td>
<td>0.10 to 1.20 in 0.01 step graduations</td>
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