



# PhoenixTM Optic System

Optical profiling system for use in food cook and bakery market.



## Oven inspection

- Damage to internal oven chamber / insulation.
- Identify product transfer or mesh belt conveyor issues.
- Discover bake debris build up on oven roof creating contamination risk.
- Discover faulty oven components (fans, ducts, control thermocouples etc).
- Check ribbon burner flame characteristics are consistent.

## Product inspection

- Product size, form and shape changes during bake.
- Product colour formation through oven.

**Direct from the oven during normal production without downtime or lost productivity!**

PhoenixTM has complemented its existing range of 'Thru-process' temperature profiling systems with the exciting innovative new "**Optic system**" for use in continuous cook / bakery ovens. The unique system allows for the process engineers and food technologists to view the inner workings of the oven under normal production conditions. Travelling through the oven, with the products the Optic system gives a product's eye view of the entire cook or bake process. The unique Optic thermal barrier has been designed to provide thermal protection for both 4K high-definition video camera and high temperature torch, providing an independent light source to ensure picture quality and definition. The torch is essential for non illuminated lines but where gas burners are used it may be beneficial to run without the torch. In the dark clear detection of flame formation patterns from the ribbon burners, is possible, to guarantee uniformity of heating characteristics. The thermal barrier is constructed in food grade 316 stainless steel and is IP65 rated to seal from moisture within the cook environment. The resulting video "Optical Oven Profile" shows process engineers details of how their process is operating without the need to stop, cool and dismantle the oven. This allows safe routine oven inspection without the problems of costly lost production and days of oven down time. The design of the thermal barrier allows easy operation either forward or reverse facing to give a totally comprehensive view / perspective of the oven operation. From the video evidence the root cause of process problems, possibly already highlighted by running the PhoenixTM temperature profile system, can be identified accurately and efficiently. Oven structural damage or faulty oven furniture such as recirculating fans, control thermocouples or heater elements / ribbon burners can be detected. Buildup of unwanted dirt or condensate can be monitored allowing accurate service and clean down schedules to be planned preventing future unplanned costly line stoppages. Problems with conveyor systems and erratic movement of products through the oven can be identified at the exact location they occur. By monitoring the product directly, the bake characteristics of the product including shape and size changes and colour generation can be monitored through the whole bake.



# Specifications



## TS64-076-1 PhoenixTM Optic System Thermal Barrier

Thermal Barrier Specification	
<b>Thermal Barrier Part No.</b>	<b>TS64-076-1</b>
<b>Heat Sink Part No.</b>	<b>TS00-5047</b>
<b>Max. operating Temperature</b>	<b>300°C / 572 °F</b>
<b>Thermal Barrier Construction</b>	<b>316 SS</b>
<b>IP Rating</b>	<b>IP65</b>
Thermal Duration HH:MM	
<b>250°C / 482 °F</b>	<b>1:00*</b>
Physical Dimensions	
<b>Height</b>	<b>76 mm / 3.0 inch</b>
<b>Width</b>	<b>257 mm / 10.1 inch</b>
<b>Length</b>	<b>245 mm / 9.6 inch</b>
<b>Weight</b>	<b>8.1 KG / 17.9 lbs</b>

\*Camera memory limited to approximately 1 hour

### AC40-092-2

#### PhoenixTM Optic System Video Camera Kit

– comprising FireCam 4K ONYX 32GB Video camera, rechargeable battery (x2), USB charger and communication cable. USB mains adaptor.

### AC40-093-3

#### PhoenixTM Optic System High Temperature Torch kit

– comprising robust high temperature torch (up to 1000 lumens) with intensity and field of view adjustment. Fitted with user replaceable rechargeable Lithium battery. Polycarbonate lens rated to 135 °C / 275 °F. Designed for bake applications typically < 250 °C / 482 °F.



Note: All Products are continually improved, specifications may be changed without prior notice. Ref: PhoenixTM\_Datasheet\_Optic System - Food\_11.0\_US 20251021.docx

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