

Irreversible Freeze Indicator

It is very critical to know and ensure that a lifesaving drug like vaccine is stored according to the recommended temperature throughout its lifecycle. WHO PQS E06/IN03.1 clearly defines the requirements for monitoring of vaccine temperatures during the different phase of vaccine cold chain. LM^{Pro} IN031 is an Irreversible Freeze Indicator. There are 3 models to choose from, based on your requirement of temperature and trigger time. A clearly visible “✓” and “X” indicates whether temperature is exceeded or not. All the parameters and alarm limits are pre-configured as per the requirement of guidelines. It comes an NABL traceable calibration certificate.

Features:

- Easy and Immediate display
- Measuring Accuracy of ± 0.5 °C or better at 0 °C
- Highly accurate and reliable
- Monitor freeze sensitive goods like
- Vaccines, medicines, Pharmaceuticals etc.
- Long Shelf Life
- Operating life upto 3.5 years
- No software required

Specifications:

General :

| | |
|----------------------------------|--|
| Internal Sensor | Thermistor - 10K NTC |
| Operating Temperature Range | -20 °C to +60 °C |
| Accuracy | ± 0.5 °C or better at 0 °C |
| Calibration | Each device accompanies NABL (ISO/IEC 17025) traceable certificate |
| Temperature measurement Interval | 30 seconds |

Calibration conformity certificate of sensor for the device.

Power Requirement :

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|--------------|--|
| Battery* | Non-Replaceable CR2032 Coin Cell Battery. Complies to IATA DGR Packing Instruction 970-Section II and hence not considered as dangerous good. |
| Battery Life | Up to 3.5 years |
| Shelf Life | Up to 3.5 years |

*: Dispose or recycle the LMPro IN031 in accordance with the WEEE 2012/19/EU guidelines or your local regulations. For the suitable recycling, the device may also be returned to the manufacturer.

Environmental Specification :

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|--|--|
| Temperature during Transportation and Storage - Device inactivated | +5 °C to +55 °C |
| Temperature during operation | -20 °C to +60 °C (EN12830:1999 Table3, Climate Type C) |
| Humidity During Transportation, Storage and usage | 0 to 95% RH non-condensing |



| Freeze Indicator | Type A (Orange) | Type B (Yellow) | Type C (Green) |
|--------------------|-----------------|-----------------|----------------|
| Alarm Limits | <= 0 °C | <= 0 °C | <= -0.5 °C |
| Alarm trigger time | 10 minutes | 60 minutes | 60 minutes |

Human Interface :

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|-------------------|---|
| Activation | Device is activated by long press of key for 10 seconds. |
| De-Activation | Cannot be manipulated, reset or deactivated without destroying it. |
| Display Type | LCD display with “✓” OK, “X” NOK symbols and “●” dot indicator. □ “✓” indicates that the temperature of load has remained above alarm limit temperature. □ “X” indicates that the temperature has fallen below alarm limit for more than alarm trigger time delay. □ A flashing “●” in right side of the display indicates that the device is working. |
| Legibility | Legible in bright sunlight and tungsten/Fluorescent lighting at 100 lux for person with normal visual acuity. |
| Mounting Device | Through eyelet provided. |
| Material | Polycarbonate Plastic non-breakable housing |
| Warranty | 15 months replacement warranty from the date of dispatch. Refer to warranty certificate for more details. |
| Service Provision | No user serviceable parts inside. |

Physical Characteristics :

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|----------------------------------|--------------------|
| Overall Dimension (L x W x H) mm | 70 x 35 x 13 mm |
| Weight | Approximate 30 gms |

Standards :

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|---------------------------------|--|
| Electromagnetic Compatibility | IEC 61000-6-2/6-3 |
| Resistance to Electrical Storms | IEC 61000-6-2; (IEC 61000-4-2 Basic Standard for applicability of tests) |
| IP Rating | IP 64; IEC 60529 |
| Impact Resistance | 5 drops from 1 meter onto concrete floor with battery in place. Device does not get damaged and there is no loss of calibration. |
| Vibration | EN 12830:1999 |
| RoHS | Compliant (EU directive 2011/65/EU) |
| Verification | In accordance with PQS verification protocol E06/IN03.VP:1 |

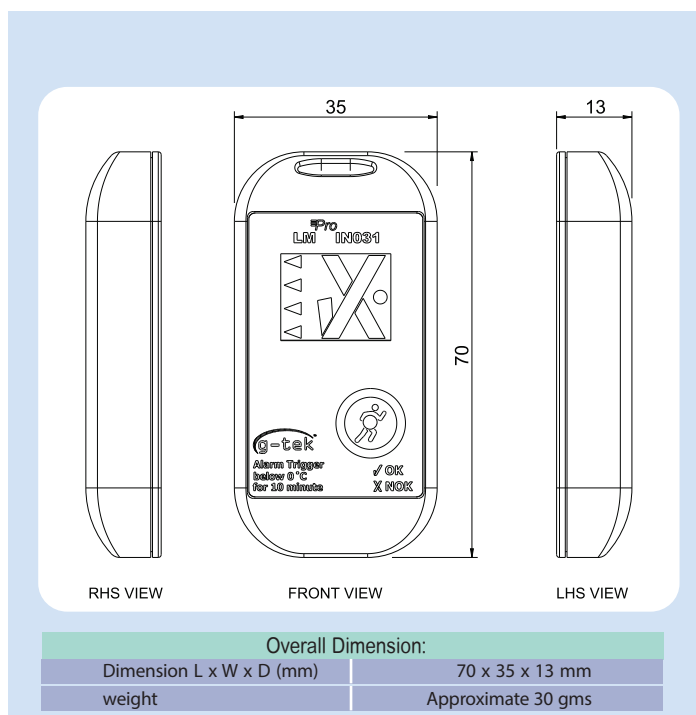
Select your ORDER Code:

9 9 9 6 0 -

Example ORDER Code:

9 9 9 6 0 - A

Code : A : LM^{Pro} IN031 Type A
 B : LM^{Pro} IN031 Type B
 C : LM^{Pro} IN031 Type C



Available in white label

Dealer / Representative

The specifications given above are an overview, and may be or may not be available in all product variants, or at an additional cost. The company reserves the right to change the specifications without prior notice, as the company follows a continual improvement philosophy for its products.



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