

ZeOn-demand printable indicators

Technical Specifications

Specifications are provided for reference. Results may vary in actual application settings. Zebra recommends always qualifying any application with thorough testing.



Technical Specifications Information

Temperature - Reversible

Environmental Response	Response Time	Accuracy	Color Change	Indication Cycle	Storage Conditions	Shelf Life
Freeze/Cold: 4°C Descending	Within a minute	+/- 2°C	Colorless to Blue	100	Store in cool, dry environment (below 30°C) protected from light	Up to 1 year from time of manufacture when stored under recommended conditions
Heat: 60°C Ascending		+/- 10°C	Colorless to Pink			

Temperature - Irreversible

Environmental Response	Response Time	Accuracy	Color Change	Indication Cycle	Storage Conditions	Shelf Life ¹
Freeze/Cold: 0°C Descending	Within 1 minute	± 2°C	Light Blue to Dark Blue	1	Store at room temperature (20°C to 25°C) protected from light and moisture ²	Up to 1 year from time of manufacture when stored under recommended conditions
Freeze/Cold: 5°C Descending		± 3°C	Colorless to Blue			
Thaw: 0°C Ascending ³	Within 15 minutes	± 2°C	Light Grey to Colorless, revealing "Thawed" text		Store in a cool, dry environment (below 30°C) protected from light and moisture	
Heat: 60°C Ascending	Within 5 minutes	± 10°C	Colorless to Magenta			
Heat: 80°C Ascending		± 5°C	Colorless to Blue			

Sterilization - Irreversible

Environmental Response	Response Time	Accuracy	Color Change	Indication Cycle	Storage Conditions	Shelf Life
121°C Saturated Steam	10 minutes +/- 30 seconds	+/- 3°C	Light to Dark	1	Store in cool, dry environment (below 25°C) protected from light and moisture	Up to 6 months from time of manufacture when stored under recommended conditions
134°C Saturated Steam	2 minutes +/- 30 seconds					

Humidity - Irreversible

Environmental Response	Response Time	Accuracy	Color Change	Indication Cycle	Storage Conditions	Shelf Life
100%	Direct Moisture-Immediate	N/A	Dark Blue to Light Blue	1	Store in a dark, cool, and dry environment (below 25°C) protected from light and moisture	Up to 6 months from time of manufacture when stored under the recommended conditions
90%	Within 24 hours					
80%	Within 13 days					

RFID High Temperature Indicator (HTI)

Environmental Response	Response Time	Accuracy	RF Response	Indication Cycle	Storage Conditions	Shelf Life
Heat 40°C Ascending	Within 2 hours at 43°C	+/- 3°C (37°C to 40°C)	Read EPC location @0x200h. If 1 appears, product exceeded threshold temperature, otherwise, product did not exceed threshold temperature.	1	Store in a dark, cool and dry environment (best at 22°C @ 50% RH) protected from light and moisture	Up to 6 months from time of manufacture when stored under the recommended conditions

Zebra Certified Thermal Materials⁴

Direct Thermal Paper

Z-Select 40000D, Z-Select 4000D Removable, Z-Select 4000D Tag, 8000D High-Temp, 800D High-Temp, 8000D Lab, Z-Select 2000D*, Z-Select 2000D Removable*, Z-Select 2000D 145 Tag⁵

Thermal Transfer Paper

Z-Select 4000T, Z-Select 4000T All-Temp, Z-Select 4000T Removable, Z-Select 4000T Tag, 8000T High-Tack, 8000T Super-Tack, 8000T Multi-Removable, 8000T Opaque, 8000T Piggyback, 8000T Lab, Z-Select 2000T*, 8000T All Temp*, Z-Select 2000T Removable*, Z-Perform 1000T Tag*

Thermal Transfer Synthetic

PolyPro 4000T, PolyPro 4000T High-Tack, PolyPro 4000T Tag, PolyPro 4000T 216 Tag*, Poly Pro 3000T Gloss High Tack*

1. The value for shelf-life may be adjusted with further comprehensive studies
2. Do not exceed temperatures above 40°C when in use. (NOTE: At around 40°C, there is a reversible loss of blue color that is regained when the sensor is cooled down again, i.e., back to room temperature. Loss of blue color will however become permanent if heated to 60°C and above.)

3. Pre-conditioning required for at least 15 minutes at or below -25°C
4. Confirm Zebra indicator compatibility with Zebra Certified Thermal Material
5. Materials available in EMEA

For more information, visit www.zebra.com/tempmonitoring



NA and Corporate Headquarters
+1 800 423 0442
inquiry4@zebra.com

Asia-Pacific Headquarters
+65 6858 0722
contact.apac@zebra.com

EMEA Headquarters
zebra.com/locations
contact.emea@zebra.com

Latin America Headquarters
zebra.com/locations
la.contactme@zebra.com