



## IR 9 Module

### Panorama™ C-Line



The Panorama C-Line takes your process to the next-level with advanced process control in a conventional line layout.

The full range of equipment options fit seamlessly together to deliver powerful coating and curing results.

Nordson ASYMTEK's Select Cure® IR-9 Oven is easily adapted to fit your production requirements. The oven is ideal for top and bottom material curing in low- to high-volume production environments. It can accommodate flash-off or IR curing functionality in the upper and lower decks. Closed-loop process controls regulate temperature and time variables to deliver a repeatable thermal process.

The IR 9 Module is available in six alternatives:

- Base Frame IR-9b-2m
- Base Frame IR-9p-2m
- Base Frame IR-9p-3m
- Base Frame IR-9p-4m
- Base Frame IR-9p-5m
- Base Frame IR-9p-6m

All equipment images are shown for illustration purposes only. Actual equipment may vary due to specific configurations.

### Features and Benefits

- Closed-loop control of thermal environment and conveyor speed
- Individual heating zones can be programmed for specific drying or curing profiles
- Glass covered heating elements release easily for effortless cleaning
- Ergonomic and safety work environment for operators
- Dropped board and board jam detection
- Space saving footprint
- Fast warm-up
- Scalable modules
- Top and bottom heating elements
- Exhaust system for enhanced safety

# IR 9 Module

Common Specifications - for all lengths

## Equipment External Dimensions

Length(s):	2260, 3400, 4520, 5360, 6200 mm
Height (excluding light beacon):	1400 ± 30 mm
Height (including light beacon):	2080 ± 30
Depth:	1190 mm

## Conveyor

Type:	Chain
Conveyor height above the floor (SMEMA):	900 to 980 mm
Width:	50 to 450 mm
Speed:	180 to 1200 mm/min
Accuracy of conveyor speed:	±1 %
Edge clearance:	5 mm
Board clearance (above and under):	100 mm
Parallelism:	±1 mm
Torque limiter:	Standard/ via motor drive

## Facility Requirements

Electrical supply:	3 phases 480 VAC DELTA + E 50/60 Hz
Total installed power (top heating configuration):	<i>Refer to table below</i>
Total installed power (bottom heating configuration):	<i>Refer to table below</i>
Extraction:	<i>Refer to table below</i>
System weight:	<i>Refer to table below</i>
Standards compliance:	SMEMA, CE, UL, NFPA, and SEMI <i>CSA available upon request</i>

## Thermal Specs

Number of zones:	<i>Refer to table below</i>
Heat up time including stabilization:	<30 min
Number of IR panels, 270 mm each (10.6"):	<i>Refer to table below</i>
Heating length:	<i>Refer to table below</i>
Wavelength µm:	3-7 µm
Maximum temperature on IR element:	320° C
Maximum process temperature on the board:	120° C*
Process profile repeatability:	±5 %
Temperature accuracy:	±5° C
Crosswise temperature uniformity on a bare board (200 mm x 200)	±8° C
Product loading variation:	±10° C
Top heating installed power:	<i>Refer to table below</i>
Bottom heating installed power:	<i>Refer to table below</i>

## Standard Peripherals

- Integrated electrical cabinet
- Electrical protection by circuit breaker
- Main disconnection switch
- 2 emergency stops in front and rear
- Light beacon:
  - Red - Alarm, operator attention needed
  - Orange - Not used
  - Flashing Green - Not used
  - Steady Green - Boards inside or ready to receive
  - Alarm buzzer - Linked to red

## Options

*Refer to table below*

\*Depending on the characteristics of the conveyed product.

# IR 9 Module

## Relative Humidity Control

Sensor accuracy:	± 3% at 60° C
Relative humidity regulation:	Included via heating chamber temperature regulation
Relative humidity regulation range:	8% to 20% relative humidity with standard production plant environment

## Additional Features

- PCB sensors
- Flow direction left-to-right with fixed front rail
- EMO functionality and software recovery
- Interface running on coating computer (Windows OS)
- Program storage
- Thermocouple failure detection
- Regulation failure detection
- Extraction safety sensor
- Heating by radiant panels on the entire length of the tunnel
- Additional access through easily removable panels
- Automatic change of the language
- Programming clock start/ stop
- Instruction and alarms management
- Failure auto-diagnostic and help software
- Traceability: Log file

# IR 9 Module

Unique Specifications - for each length

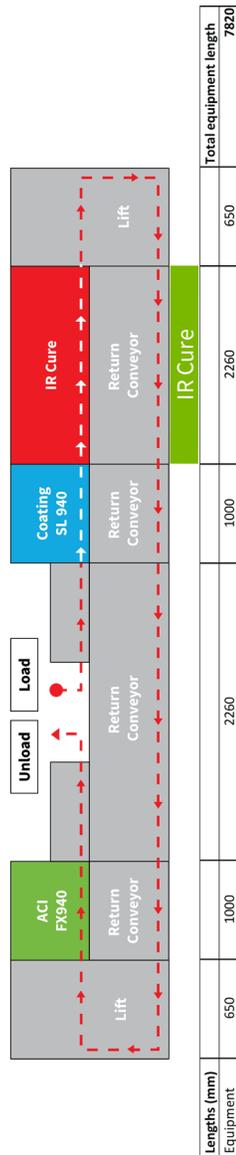
Oven	IR-9b-2m	IR-9p-2m	IR-9p-3m	IR-9p-4m	IR-9p-5m	IR-9p-6m
<b>Equipment External Dimensions</b>						
Length:	2260 mm	2260 mm	3400 mm	4520 mm	5360 mm	6200 mm
<b>Thermal Specs</b>						
Number of zones:	Project Dependent	4	6	8	10	12
Heating length:		2060 mm	3200 mm	4320 mm	5160 mm	6000 mm
Number of IR panels, 270 mm each (10.6"):		7 top 7 bottom	10 top 10 bottom	14 top 14 bottom	17 top 17 bottom	20 top 20 bottom
Top heating installed power:		13 kW / 480 V	18 kW / 480 V	25 kW / 480 V	31 kW / 480 V	36 kW / 480 V
Bottom heating installed power:		13 kW / 480 V	18 kW / 480 V	25 kW / 480 V	31 kW / 480 V	36 kW / 480 V
<b>Facility Requirements</b>						
Extraction:	Project Dependent	250 to 400 m <sup>3</sup> /H	250 to 400 m <sup>3</sup> /H	600 to 800 m <sup>3</sup> /H	600 to 800 m <sup>3</sup> /H	600 to 800 m <sup>3</sup> /H
Total installed power (top heating configuration):		13 kW	18 kW	26 kW	31 kW	36 kW
Total installed power (bottom heating configuration):		26 kW	36 kW	51 kW	62 kW	72 kW
System weight:		720 kg	1000 kg	1400 kg	1720 kg	2000 kg
<b>Relative Humidity Control</b>						
Relative humidity sensor:	Project Dependent	Quantity 2	Quantity 2	Quantity 4	Quantity 4	Quantity 4

# IR 9 Module - Options for each length

Oven	IR-9b-2m	IR-9p-2m	IR-9p-3m	IR-9p-4m	IR-9p-5m	IR-9p-6m
Entrance top IR heating element (2 heating elements) forced air flow (5 elements)	●	–	–	–	–	–
Entrance top IR heating element (4 heating elements) forced air flow (3 elements)	○	–	–	–	–	–
Entrance top IR heating element (7 heating elements) forced air flow (0 elements)	○	–	–	–	–	–
Entrance bottom IR heating element (2 heating elements)	○	–	–	–	–	–
Top IR heating elements (complete length)	–	●	●	●	●	●
Bottom IR heating elements (complete length)	○	○	○	○	○	○
IR regulation (adjustable power %)	●	–	–	–	–	–
IR regulation (adjustable temperature)	○	●	●	●	●	●
Bottom IR regulation (adjustable temperature)	○	●	●	●	●	●
<b>Conveyor</b>						
Chain conveyor 5 mm pin chain 50 to 450 mm width opening	●	●	●	●	●	●
Board drop detection	○	●	●	●	●	●
Board counter (with product visualization)	○	●	●	●	●	●
Board jam detection	○	●	●	●	●	●
Board drop and count package	○	–	–	–	–	–
Motorized width adjustment	●	●	●	●	●	●
Automatic width adjustment	–	●	●	●	●	●
Follow me width adjustment	○	○	○	○	○	○
Chain conveyor - 3 mm pin	○	○	○	○	○	○
Right-to-left conveyor direction (factory configured)	○	○	○	○	○	○
Heavy duty conveyor	○	○	○	○	○	○
Adjustable shutter at the entrance	○	○	○	○	○	○
<b>Dual Track Conveyor</b>						
Dual track (same way for the 2 tracks) 4 rails	○	○	○	○	○	○
Dual track (opposite way for the 2 tracks) 3 rails	–	○	○	○	○	○
Double board dropped detection	○	●	●	●	●	●
Double board counter	○	●	●	●	●	●
Double jam detection	○	●	●	●	●	●
<b>Software</b>						
Software on coating machine's computer	●	●	●	●	●	●
Recipe storage	○	●	●	●	●	●
Automatic program loading via coating machine	–	○	○	○	○	○
Independent software	○	○	○	○	○	○
<b>Relative Humidity Control</b>						
IR-9, OPT, RHC	–	○	○	○	○	○
Relative Humidity measurement in the heating chamber	–	○	○	○	○	○

# IR 9 Module

## Sample Line Configuration



To see more line configurations, please refer to the catalog on the website.

For more information, visit our website to locate your local representative or contact your regional office:

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