



The TVS126MA creates a temperature-controlled environment for culturing microorganisms and automatically records growth curves.

### Features

- The integrated design of this “Bio-Photorecorder” allows the user to easily operate a highly sophisticated incubation system. Heating, cooling, and rocking functions, as well as functions to simultaneously measure and record the absorbance and temperature of 12 samples, are combined in one unit.
- The temperature of the incubator block stabilizes quickly, and temperature distribution remains stable. The circulating cooling agent is a nonflammable antifreeze to ensure safe operation.
- The monode rocking motion allows the user to set a desired rocking speed ranging between 20 and 70 rpm, making it easy to set gentle or vigorous movement.
- Up to 12 cells (L-shaped culture tubes) can be utilized, with the absorbance values of each cell recorded automatically using an intermittent recorder. Data management during operation is simple: data is recorded automatically for the set interval (until the incubator block reaches the specified temperature or until the programmed time elapses).
- The TVS126MA can be connected to a PC via RS-232C communication to save, analyze, or print data.

### Main Applications

- The TVS126MA makes it easy to conduct temperature sensitivity tests for checking the optimal growth temperature and growth range of microorganisms, etc., under a temperature-gradient environment.
- The TVS126MA facilitates agent sensitivity tests on microorganisms under a constant-temperature environment.

# Specifications

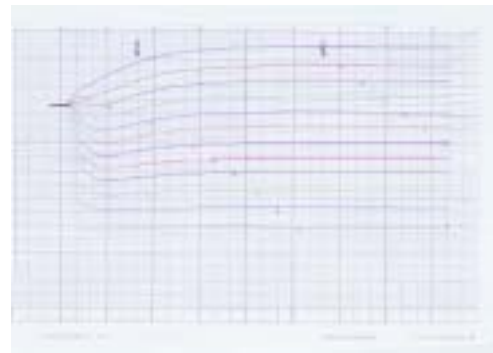
<b>Low Temperature Unit</b>	
Temperature Range	5°C to ambient room temperature+5°C
Temperature Control	PID (Pt sensor)
Temperature Stability	(±0.3% of set temp.)+(±1LSD)
Refrigerator	300W (air cooled hermetic type)
Circulation Pump	45W
Heater	400W (for temperature gradient)
Heater	700W (for constant temperature)
<b>High Temperature Unit</b>	
Temperature Range	Room temp.+5°C 70°C
Temperature Control	PID (Pt sensor)
Temperature Stability	(±0.3% of set temp.)+(±1LSD)
Heater	300W (for temperature gradient)
<b>Rocker</b>	
Motion	Monode rocking motion
Angle	(Max.) 30 degree
Speed	20 to 70 rpm, set in 1 rpm increments
<b>Incubator</b>	
Block	Al conductivity block
Tube holders	twelve 10mL L-shaped tubes as standard accessories
<b>Detector</b>	
Light source	Tungsten lamps. 12 pcs.
Detector	Silicone photo-diodes 12 pcs.
Filter	660nm glass filter
<b>Recording</b>	
Recorder	12 dots (6-colors×2)
Chart	180mm width
Accuracy of recording	±0.5%
Feeding speed	Automatic
Record data	Temperature and absorption data
<b>Programming Functions</b>	
Auto start (time)	After 15 to 300 min.
Auto start (temperature)	Setting ±1°C to ±5°C range for temperature selected
Rocking time	2 to 99 min. (rocking) 0 to 99 min. (resting)
Measurement Interval	2 to 99 min.
Operation time	1 hr. to 250 hr.
<b>Data output</b>	RS-232C, for temperature and absorption data
<b>Safety device</b>	Circuit breaker, double anti-overheat device, cooling water monitor, overload protector of the rocking motor
<b>Weight</b>	180kg approx.
<b>Accessories</b>	L-shaped tube 30pcs. Coolant 2L Tray 1 pc. Chart paper 3 pcs. Ribbon cassette 2 pcs.

## L-Shaped Culture Tubes

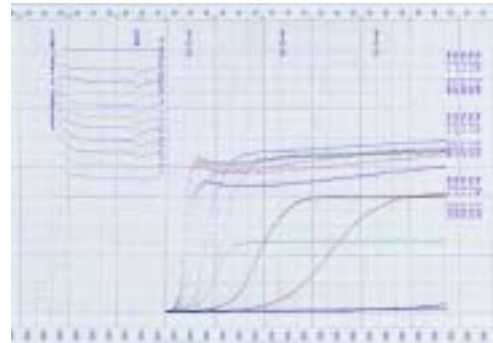


By inserting L-shaped culture tubes into the gradient block, an intermittent temperature-gradient incubation using a liquid medium can be performed. Up to 12 L-shaped culture tubes can be set at the same time.

## Temperature Stability, 5° to 70°



## Growth Curves of 12 Samples



### Operation Panel

- Easy to read LCD display
- Temperature, rocking speed, and measuring time can be easily entered on the keypad



### Recorder

- Scale of recorder is in even increments:
- set temperature range 0 to 100°C
  - set absorption range OD 0 to 2