

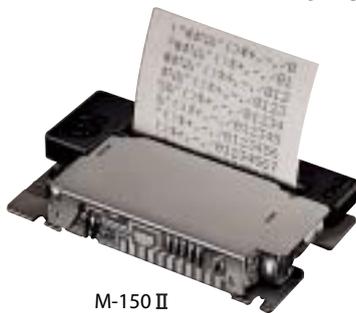
Impact Printers

High speed, simultaneous printing of multiple copies, low running costs, easy maintenance: these are just some of the features of impact printers. Impact printers are especially suited to check endorsement and validation applications. With an extensive impact printer product line, Epson can offer you the best model for your application.

1-STATION PRINTER

Shuttle Impact Dot

M-150/190 Series 190G Series LA-190G



M-150 II

M-190G



LA-190G

Model	Options
M-150	—
M-190 Series	Manual feed knob
M-190G Series	Manual feed knob

SPECIFICATIONS

	LA-190G
Power	2.7 to 5.8 V (Topr = -15 to 85°C)
Character	5 x 7 font (alphanumerics, extended graphics, international characters)
Package	LQFP 64 pin
Interface	Serial, Parallel
Support Models	M-150 II, M-190 / 191 / 192 / 195, M-190G / 192G

See the specifications on page 25 for details.

M-150	M-150 II			
M-190 Series	M-190	M-191	M-192	M-195
M-190G Series	M-190G	M-192G		

M-150II : Smallest shuttle dot printer in the world

Ultra-compact, yet highly reliable

The M-150II of impact dot matrix printers is the world's most compact. They weigh approx. 60 g yet offer extremely high performance.

Perfect for compact devices

Because they are so compact and require so little power, the M-150II is ideal for numerous printing applications, from handy terminals to laptop computers and compact measuring instruments.

Battery operation

This battery-operated printer runs on extremely low power.

M-190 : Best-selling shuttle dot printers

Faster, stronger

The M-190 series offers even better performance than the M-150 series. A dramatic improvement in printing speed brings new advances to applications such as CAT/EFT and measuring instruments.

High reliability

These printers also offer outstanding reliability for peace of mind.

Compact, lightweight

The series provides high performance in an ultra-compact, lightweight body and support for a wide variety of applications.

M-190G : upgrade from the M-190 series

Clear and speedy printouts

The M-190G series has a higher printing speed than the earlier M-190 series. This impact dot-matrix printer delivers crisp printouts.

Improved handling of poor-quality paper

Handles poor-quality paper well.

Capable of accepting ERC-40 long-life ribbon

The M-190G Series accepts the new ERC-40 long-life ribbon, which is capable of printing two million characters.

CONSULTING DISTRIBUTOR



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Item	Model	1 Station Printer				
		M-150 II	M-190 Series			
		M-190	M-191	M-192	M-195	
Printing Method	Shuttle impact dot matrix					
Printing Format						
Font	5 x 7					
Column capacity	16 columns	24 columns	32 columns	40 columns	18 columns	
Character size	1.8 (W) x 2.5 (H) mm	1.7 (W) x 2.6 (H) mm	1.3 (W) x 2.6 (H) mm	1.1 (W) x 2.6 (H) mm	1.7 (W) x 2.6 (H) mm	
Line spacing	* 3.5 mm	3.7 mm (In case of 5 x 7 font and 3 dots / line paper feed)				
Column spacing	2.1 mm	2.0 mm	1.5 mm	1.2 mm	2.0 mm	
Number of total dots	96 dots / line	144 dots / line	192 dots / line	240 dots / line	108 dots / line	
Printing Speed	1.0 line / sec. (at 4.5 VDC)	2.5 lines / sec. (at 4.8 VDC)	1.9 lines / sec. (at 4.8 VDC)	1.5 lines / sec. (at 4.8 VDC)	2.5 lines / sec. (at 4.8 VDC)	
Print head						
Voltage	3.3 to 5.0 VDC	3.3 to 5.2 VDC				
Peak current	Approx. 3 A / solenoid (at 4.5 VDC)	Approx. 2.5 A / solenoid (at 4.8 VDC)				
Motor						
Voltage	3.8 to 5.0 VDC	3.8 to 5.2 VDC				
Mean current	Approx. 0.17 A (at 4.5 VDC)	Approx. 0.35 A (at 4.8 VDC)				
Paper	Roll paper					
Dimensions	44.5 ± 0.5 mm (W) x dia. 50 mm max.	57.5 ± 0.5 mm (W) x dia. 83 mm max.				44.5 ± 0.5 mm (W)
Total Thickness	0.07 mm	0.06 to 0.085 mm				
Copy Capability	Original and one copy					
Ribbon Cassette	ERC-05	ERC-09 / 22				
Operating Temperature	0 to 50°C					
Reliability						
Print head Life	-					
MCBF	500,000 lines	1,500,000 lines	1,100,000 lines	900,000 lines	1,500,000 lines	
Printer Life	-	2,250,000 lines	1,650,000 lines	1,350,000 lines	2,250,000 lines	
Overall Dimensions	73.2 (W) x 42.6 (D) x 12.8 (H) mm	91.0 (W) x 46.9 (D) x 15.8 (H) mm				
Mass (without options)	Approx. 60 g	Approx. 100 g				

(*) For a 5 x 7 font and 3 dots per line paper feed.

Item	Model	1 Station Printer		Slip Printer
		M-190G Series		M-290
		M-190G	M-192G	
Printing Method	Shuttle impact dot matrix			
Printing Format				
Font	5 x 7			7 x 7
Column capacity	24 columns	40 columns		42 columns
Character size	1.7 (W) x 2.6 (H) mm	1.1 (W) x 2.6 (H) mm		1.3 (W) x 2.9 (H) mm
Line spacing	3.7 mm (In case of 5 x 7 font and 3 dots / line paper feed)			4.2 mm
Column spacing	2.0 mm	1.2 mm		1.6 mm
Number of total dots	144 dots / line	240 dots / line		210 dots / line
Printing Speed	2.7 lines / sec. ± 20%	1.8 lines / sec. ± 20%		2.3 lines / sec. (at 26.4 VDC)
Print head				
Voltage	5.0 ± 0.5 VDC			24 VDC ± 10%
Peak current	Approx. 2.5 A / solenoid (at 5 VDC)			Approx. 1.6 A / solenoid (at 24 VDC)
Motor				
Voltage	5.0 ± 0.5 VDC			24 VDC ± 10%
Mean current	Approx. 0.35 A (at 5 VDC)			Approx. 0.15 A (at 24 VDC, P.F. motor), Approx. 0.15 A (at 24 VDC, CR motor)
Paper	Roll paper			Slip paper
Dimensions	57.5 ± 0.5 mm (W) x dia 83 mm max.			80 (W) x 80 (L) mm mini. to 182 (W) x 257 (L) mm max.
Total Thickness	0.06 to 0.085 mm			0.09 to 0.35 mm
Copy Capability	Original and one copy			Max : Original and four copies (at 25°C)
Ribbon Cassette	ERC-09 / ERC-22 / ERC-40			ERC-27
Operating Temperature	-10 to 50°C (using ERC-22, ERC-40)			0 to 50°C
Reliability				
Print head Life	-			100,000,000 strokes / wire
MCBF	1,500,000 lines	1,000,000 lines		1,500,000 lines
Printer Life	2,250,000 lines	1,500,000 lines		-
Overall Dimensions	91.0 (W) x 46.9 (D) x 15.8 (H) mm			138.0 (W) x 70.5 (D) x 59.5 (H) mm
Mass (without options)	Approx. 100 g			Approx. 550 g

UL478, CSA220 recognized products are available on request.
(Safety Standards)