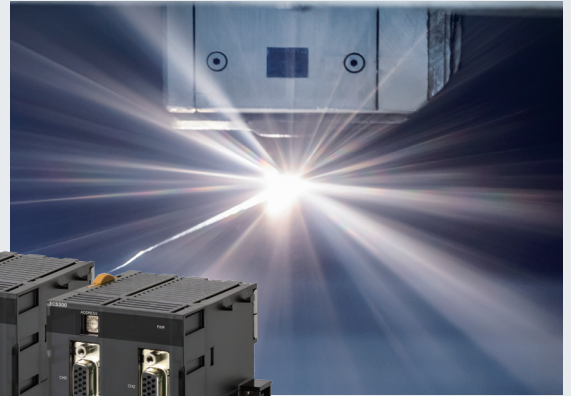


Minimize laser ON/OFF commissioning time by balancing high-throughput and high-quality laser processing



CK3W-GC/CK3W-ECS **NEW**



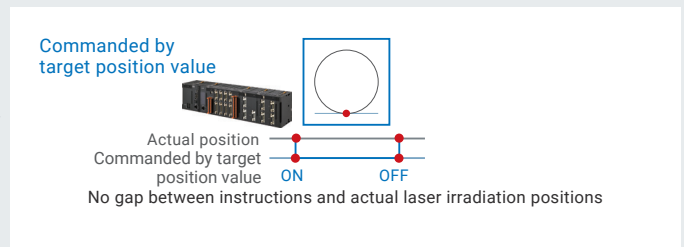
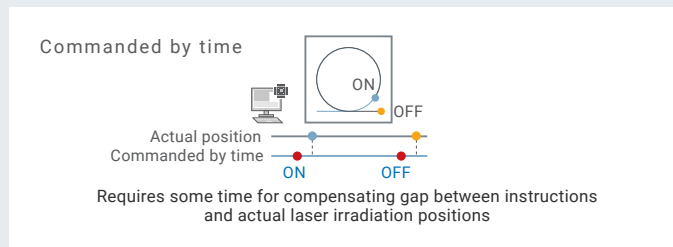
Reducing commissioning time by target position-based Laser ON/OFF

Conventional Adjusting laser ON/OFF timing by delay time takes long time (about 10 to 15 days*1).

Time-based ON/OFF setting requires calculation for motion behavior parameters (e.g., acceleration, deceleration and laser response time). Adjustment of delay time for each parameters requires repeating try and error testing until the target performance is achieved.

CK3W-GC Laser ON/OFF timing can be set easily by using target position value directly (about 2 to 3 days*1 to complete which reduces adjustment time by 80%*2).

The target performance can be achieved by simply setting target laser ON/OFF timing by target position value without considering time-related settings (e.g., acceleration and deceleration).



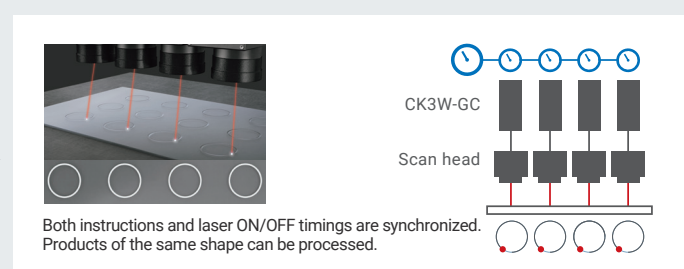
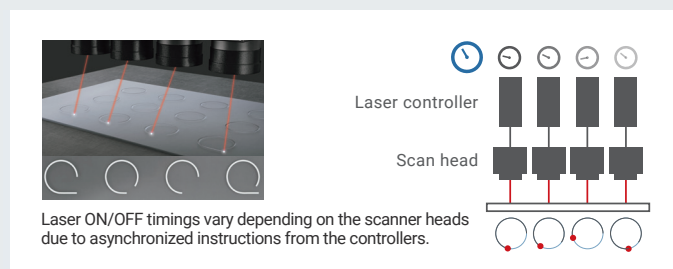
Easy multiple parts manufacturing

Conventional Adjusting laser ON/OFF timing takes long time when multiple same shape parts are processed simultaneously (about 15 to 20 days*1).

One laser controller is installed for one scanner head for each part processing to configure multiple parts manufacturing. Errors among processed parts will occur as the instructions of controllers are not synchronized. Each scanner head needs to be adjusted and to compensate these errors by try and error approach, which increases adjustment time in proportion to the number of the scanner heads.

CK3W-GC Easy multiple parts manufacturing without considering of errors among controllers (about 2 to 3 days*1 to complete which reduces adjustment time by 90%*2).

Synchronized operations of multiple CK3W-GC enable precise processing of multiple parts without the need to adjust the scanner heads. Even if the number of the scan heads increases, multiple parts can be processed easily.



*1.Omron survey. *2.Performance comparison with previous Omron products.

Improving machine throughput by synchronizing laser output and stage movement

Conventional

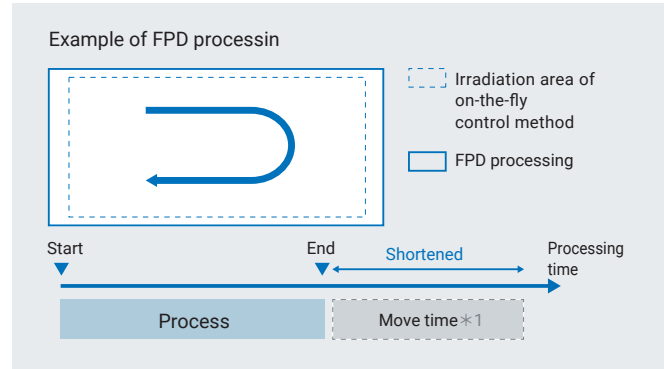
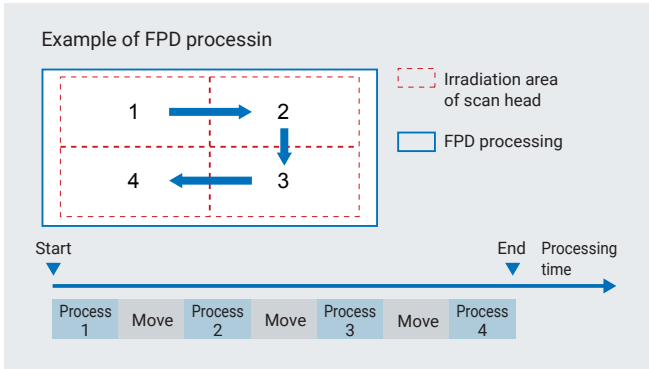
Throughput gets worse as a part must be processed after the stage stops

Large-area profiling in FPD and other manufacturing typically uses the step-and-repeat method. In this method, the stage is moved to the irradiation area of the scan head, and then laser processing is performed. Stage stopping time makes the throughput worse.

CK3W-GC

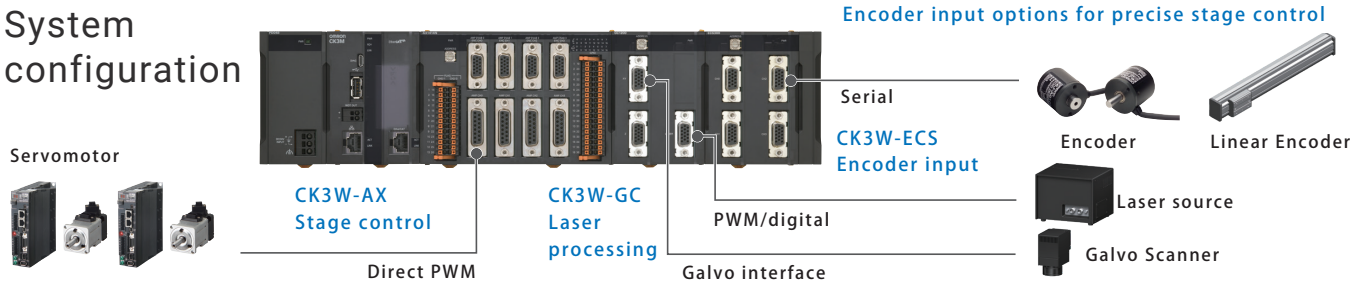
High throughput can be achieved by processing parts on the moving stage

The CK Series uses the on-the-fly control method to perform laser processing while moving the stage. This method can reduce the time required to stop the stage, improving throughput by approximately 35% compared to the step-and-repeat method.



*1. Move time with the step-and-repeat method.

System configuration



Ordering Information

Laser Interface Unit

Product name	Communications method	Laser output	Model
Laser Interface Unit	XY2-100	PWM output	CK3W-GC1100
		PWM output, TCR output	CK3W-GC1200
	SL2-100	PWM output	CK3W-GC2100
		PWM output, TCR output	CK3W-GC2200

Encoder Input Unit

Product name	Encoder type	Number of channels	Protocol	Model
Encoder Input Unit	Serial encoder	4 channels	BiSS-C, Endat2.2, and R88M-1L□/-1M□ Motor built-in encoder	CK3W-ECS300

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- The product photographs and figures that are used in this catalog may vary somewhat from the actual products.

Note: Do not use this document to operate the Unit.

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