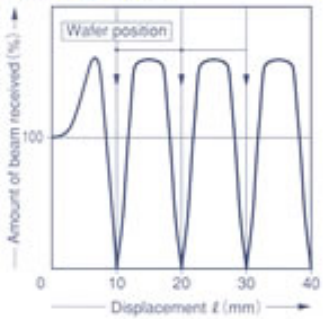
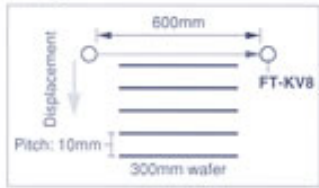


## Reliable Mapping of 300mm Wafers!

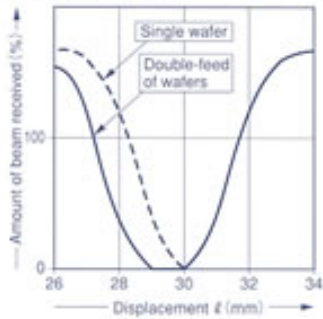
### Amount of beam received during wafer mapping (Taking beam uninterrupted state as 100%)



As shown in the above graph, FT-KV8 is very little affected by reflection from the surroundings and no beam is received in the presence of a wafer. Therefore, each wafer can be detected reliably.



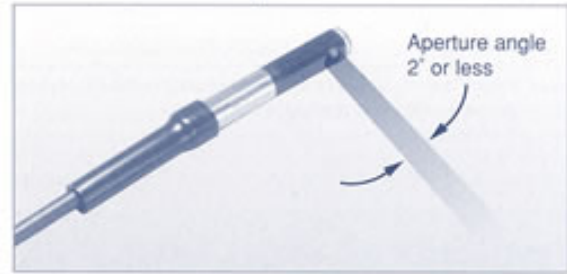
### Amount of beam received during double-feed of wafers (Taking beam uninterrupted state as 100%)



As shown in the above graph, FT-KV8 is able to reliably recognize the difference between single and double-feed of wafers.

### Ultra-narrow Aperture Angle of 2° or Less

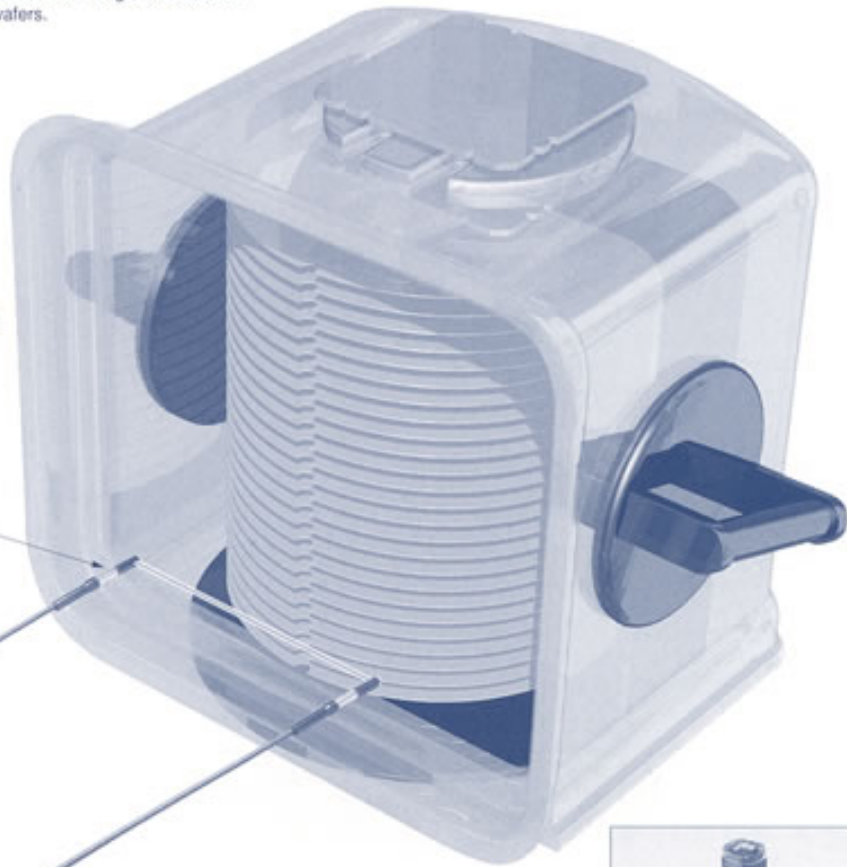
It has an aperture angle of 2° or less (1/2 of the conventional models), so that, in comparison with the conventional models, it hardly receives any extraneous light from the surroundings. It is most suitable for wafer mapping because it can reliably sense each wafer, one by one, in the FOUP. Moreover, it can also stably sense double-feed of wafers.



### Long Sensing Range: 700mm

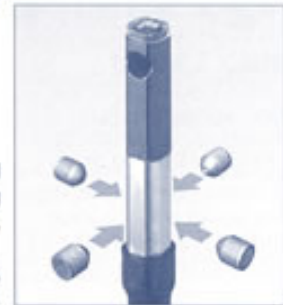
Since its sensing range is 700mm, it can detect even the 300mm wafer with sufficient margin.

Narrow beam side-view type fiber  
**FT-KV8**



### Simple Mounting!

The fiber tip has four chamfered faces, either parallel or perpendicular to the optical axis. Hence, mounting can be done with a set screw from any direction and, moreover, beam alignment is simple. Further, since the fiber is 2m long and free-cut type, it can be cut to suit the equipment in which it is used.

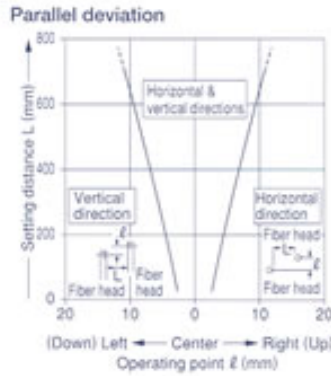


## SPECIFICATIONS

Type	Narrow beam side-view	
Item Model No.	FT-KV8	
Applicable amplifiers	Red LED type of FX-D1, FX-A1 and FX-M1 series	
Sensing range	700mm	
Min. sensing object	φ0.3mm opaque object (at the optimum sensitivity)	
Repeatability	Perpendicular to sensing axis: 0.05mm or less	
Aperture angle	2° or less	
Allowable bending radius	R25mm or more	
Fiber cable length	2m free-cut	
Ambient temperature	-40 to +60°C (No dew condensation or icing allowed). Storage: -40 to +60°C	
Ambient humidity	35 to 85% RH. Storage: 35 to 85% RH	
Material	Fiber core	Acrylic
	Sheath	Polyethylene
	Fiber head	Stainless steel (SUS304) (Holder: Polycarbonate, Reflector: Acrylic)
Accessory	FX-CT1 (Fiber cutter): 1 No.	

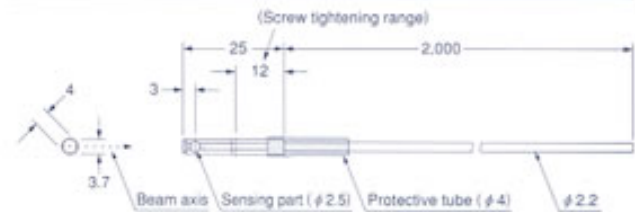
Note: Please refer to the sensor general catalog or the FX series catalog for further details of the applicable amplifiers.

## SENSING CHARACTERISTICS(TYPICAL)



## DIMENSIONS(Unit: mm)

Free-cut



## Digital setting fiber sensor FX-D1 series

Innovative feature! Simple operation with jog switch!!

Just three basic operations



Just press the jog switch, for setting.

A fine increase of threshold value is possible simply by turning the jog switch.

A fine decrease of threshold value is possible simply by turning the jog switch.

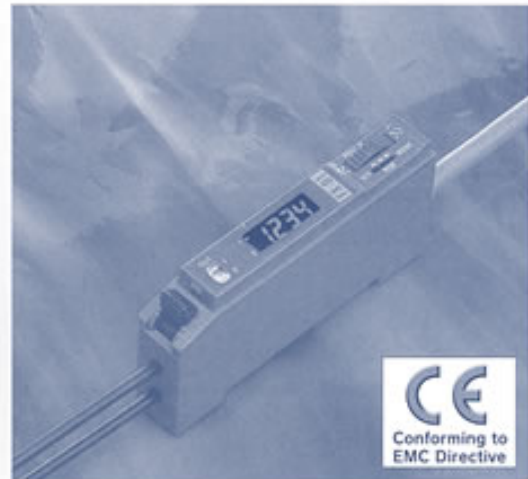
### Clearly visible digital display!

Since the display has a backlight, the values can be read even in a dark place.

### Numerical control of threshold and incident light levels!

Since the threshold level and the incident light level can be numerically displayed, these levels can be numerically specified and checked during assembly line setup or maintenance.

Further, the margin available for sensing can be known at a glance by changing to percentage display.



### MAIN SPECIFICATIONS

- Supply voltage: 12 to 24V DC±10%
- Current consumption: 45mA or less
- Output (Output 1, Output 2): NPN open-collector transistor or PNP open-collector transistor
- Ambient temperature: 0 to +50°C
- Weight: 70g approx.



All information is subject to change without prior notice.

Ramco Innovations □  
 1207 Maple Street □  
 West Des Moines IA USA 50265 □  
 800-280-6933 - □  
 www.ramcoinnovations.com