

## 25/400 双包层掺镱光纤和匹配的无源光纤

### 25/400 YDCF and matched passive fiber

#### 产品描述 Product description

上海光机所双包层掺镱光纤采用优化的磷铝硅三元体系纤芯成分和液相、气相多步掺杂工艺，广泛应用于 1 $\mu$ m 高功率光纤激光器、光纤放大器，可用于材料加工、军事、医疗和科研等领域。

Ytterbium-doped double cladding fibers made in SIOM are fabricated by optimized core glass composition with phosphorus aluminum silica ternary system based on liquid/gas multi steps doping process. It can be widely used in 1 $\mu$ m high power fiber lasers, fiber amplifiers, for materials processing, military, medical and scientific research fields.

#### 产品特性 Product characteristics

- 高激光效率 High laser efficiency
- 低光子暗化效应 Low photo-darkening effect
- 低非线性 Low nonlinearity
- 几何尺寸的高精度控制 High precision geometric
- 可靠的高温、高湿环境稳定性 Reliable environmental stability

#### 产品应用 Product application

- 军事、工业、科研等领域 Military, industrial, scientific research, etc.
- 连续光纤激光器 CW fiber laser system

Fiber Specifications	YDF-25/400-DC	GDF-25/400-DC
<b>Optical Properties</b>		
Working wavelength (nm)	1040-1100	1040-1100
NA <sub>core</sub>	0.065 $\pm$ 0.005	0.065 $\pm$ 0.005
NA <sub>cladding</sub>	$\geq$ 0.46	$\geq$ 0.46
Cladding absorption (dB/m)	0.6 $\pm$ 0.1 (915nm)	-
Core attenuation (dB/km)	$\leq$ 15.0(1200 nm)	$\leq$ 15.0(1200 nm)
	$\leq$ 30.0 (1300 nm)	$\leq$ 30.0 (1300 nm)
Cladding light Loss (dB/km)	$\leq$ 15.0 (1095 nm)	$\leq$ 15.0 (1095 nm)
<b>Geometric and Mechanical Properties</b>		
Core diameter ( $\mu$ m)	25.0 $\pm$ 1.0	25.0 $\pm$ 1.0
Cladding diameter ( $\mu$ m)	400.0 $\pm$ 10.0 (face-face)	395.0 $\pm$ 5.0
Coating diameter ( $\mu$ m)	550.0 $\pm$ 15.0	550.0 $\pm$ 10.0
Concentricity ( $\mu$ m)	$\leq$ 2.0	$\leq$ 2.0
Coating material	Acrylate	Acrylate
Tension screening	$\geq$ 100 kpsi	$\geq$ 100 kpsi

