

# High Performance Fiber Fusion Splicer

(auto arc adjustment, lightweight, all directional core alignment)

(patent pending)



DATASHEET

BUY NOW



## Features

- Low Cost
- Low Loss
- Fast
- Lightweight

## Applications

- Production
- Test
- R&D

The Agiltron TUNE 500 Splicer provides high performance fiber fusion splicing at an unmatched low cost. It incorporates advanced features of 6-motor all directional core alignment that enables a single clamp holder for fibers of different diameters, automatic in-process arc current adjustment to ensure low loss and high-fiber -pull-strength, and the use of a long-lasting fiber cleaving blade. The machine is also lightweight with a high power rechargeable battery for portability.

The kit includes the splicer, fiber stripper, battery pack, AC adapter, AC power cord, a high-performance made-in-the-USA cleaver, and carry case. 1-Year Warranty

## Specifications

| Parameter                            | Min                       | Typical          | Max | Unit      |
|--------------------------------------|---------------------------|------------------|-----|-----------|
| Fiber Type                           | multimode and single mode |                  |     |           |
| Insertion Loss                       | 0.01                      | 0.05             | 0.1 | dB        |
| Fiber Glass Diameter                 | 80                        |                  | 150 | μm        |
| Fiber Buffer Diameter (with coating) | 100                       |                  | 400 | μm        |
| Stripped Coating Length              | 7                         | 9                | 10  | mm        |
| Splicing Strength                    |                           | 2                |     | N         |
| Electrode Life                       |                           | 5000             |     | discharge |
| Cleaver Blade Life                   |                           | 30,000 [2]       |     | cleaving  |
| Remote Operation Battery             |                           | 5200mAh included |     |           |
| Real Time Arc Calibration            |                           | included         |     |           |
| Protection Shrink Oven               |                           | built-in         |     |           |
| Monitor TFT Color                    |                           | 4.3              |     | inch      |
| Image Magnification                  |                           | 320X             |     |           |
| Operating Humidity (non-condensing)  |                           |                  | 85  | %         |
| Operating Temperature                | -20                       |                  | 45  | °C        |
| Storage Temperature                  | -40                       |                  | 80  | °C        |

### Notes:

[1]. Active alignment, Sensitive to fiber bending

[2]. Rotate 16 positions for every 1000 fiber cleaving

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### Ordering Information (Part Number)

|        | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/>                                     | <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
|--------|---------------------------------------------------|--------------------------------------------------------------|--------------------------|---------------------------------------------------|---------------------------------------------------|
| Prefix | Version                                           | Fiber Diameter                                               | Battery                  | Extra Battery                                     | Extra Cleaver Blade                               |
| FSPL-  | 500 = 55                                          | 125 $\mu\text{m}$ = 5<br>80 $\mu\text{m}$ = 8<br>Special = 0 | Yes = 1<br>No = 0        | Yes = 11<br>No = 00                               | Yes = 11<br>No = 00                               |

The Agiltron TUNE 500 Splicer comes with 1 year warranty against manufacturing defects. The warranty does not cover consumables such as electrodes, blades, battery, nor maintenance.

### Application Notes

#### Fiber Core Alignment

Note that the minimum attenuation for these devices depends on excellent core-to-core alignment when the connectors are mated. This is crucial for shorter wavelengths with smaller fiber core diameters that can increase the loss of many decibels above the specification if they are not perfectly aligned. Different vendors' connectors may not mate well with each other, especially for angled APC.

#### Fiber Cleanliness

Fibers with smaller core diameters ( $<5 \mu\text{m}$ ) must be kept extremely clean, contamination at fiber-fiber interfaces, combined with the high optical power density, can lead to significant optical damage. This type of damage usually requires re-polishing or replacement of the connector.

#### Maximum Optical Input Power

Due to their small fiber core diameters for short wavelength and high photon energies, the damage thresholds for device is substantially reduced than the common 1550nm fiber. To avoid damage to the exposed fiber end faces and internal components, the optical input power should never exceed 20 mW for wavelengths shorter 650nm. We produce a special version to increase the how handling by expanding the core side at the fiber ends.