

## PRODUCT DATASHEET

# ES-HG-S11-F14-R100

## Precision Transmission Component

Cup Harmonic Gearboxes | Lightweight Cup Unit Type I

### Product Overview

Precision Transmission Component with rated Torque 10 N·m, instantaneous Maximum Torque 70 N·m and start/Stop Peak Torque 36 N·m.

### Key Specifications

| PARAMETER                    | VALUE | UNIT    |
|------------------------------|-------|---------|
| Rated Torque                 | 10    | N·m     |
| Instantaneous Maximum Torque | 70    | N·m     |
| Start/Stop Peak Torque       | 36    | N·m     |
| Reduction Ratio              | 100   |         |
| Backlash                     | ≤20   | arc sec |
| Maximum Input Speed          | 8500  | r/min   |
| Allowable Average Torque     | 14    | N·m     |
| Frame Size                   | 14    |         |
| Weight                       | 0.09  | kg      |

## Technical Specifications

| PARAMETER                        | SPECIFICATION                    | UNIT    | NOTES                                |
|----------------------------------|----------------------------------|---------|--------------------------------------|
| <b>PERFORMANCE</b>               |                                  |         |                                      |
| Rated Torque                     | 10                               | Nm      | Frame Size: 14; Reduction Ratio: 100 |
| Instantaneous Maximum Torque     | 70                               | Nm      | Frame Size: 14; Reduction Ratio: 100 |
| Start/Stop Peak Torque           | 36                               | Nm      | Frame Size: 14; Reduction Ratio: 100 |
| Backlash                         | ≤20                              | arc sec | Frame Size: 14; Reduction Ratio: 100 |
| Allowable Average Torque         | 14                               | Nm      | Frame Size: 14; Reduction Ratio: 100 |
| <b>MECHANICAL</b>                |                                  |         |                                      |
| Frame Size                       | 14                               |         | Frame Size: 14; Reduction Ratio: 100 |
| Weight                           | 0.09                             | kg      | Frame Size: 14; Reduction Ratio: 100 |
| Wave Generator Dimension T       | 9.4+0.10 / 12.8+0.10 / 16.3+0.10 | mm      | Varies by published configuration.   |
| Wave Generator Bore U            | φ8H7 / φ11H7 / φ14H7             |         | Varies by published configuration.   |
| Wave Generator Keyway W          | 5JS9/P9 / 3JS9/P9 / 4JS9/P9      |         | Varies by published configuration.   |
| <b>RELIABILITY</b>               |                                  |         |                                      |
| Design Life                      | 15000                            | h       | Frame Size: 14; Reduction Ratio: 100 |
| <b>ADDITIONAL SPECIFICATIONS</b> |                                  |         |                                      |
| Reduction Ratio                  | 100                              |         | Frame Size: 14; Reduction Ratio: 100 |
| Maximum Input Speed              | 8500                             | r/min   | Frame Size: 14; Reduction Ratio: 100 |
| Average Input Speed              | 3500                             | r/min   | Frame Size: 14; Reduction Ratio: 100 |

## Dimensional & Integration Overview

### Mechanical Overview

| PARAMETER                  | VALUE                            | UNIT |
|----------------------------|----------------------------------|------|
| Frame Size                 | 14                               |      |
| Weight                     | 0.09                             | kg   |
| Wave Generator Dimension T | 9.4+0.10 / 12.8+0.10 / 16.3+0.10 | mm   |
| Wave Generator Bore U      | φ8H7 / φ11H7 / φ14H7             |      |
| Wave Generator Keyway W    | 5JS9/P9 / 3JS9/P9 / 4JS9/P9      |      |

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**01** Specifications are subject to change without notice. Verify the current product configuration before final design release.

**02** 2D drawings, CAD files and integration documentation are controlled documents and are supplied separately on request.