

1. Einleitung: Lesen Sie die Betriebsanleitung...  
2. Bedienung: Lesen Sie die Betriebsanleitung...  
3. Wartung: Lesen Sie die Betriebsanleitung...

1. Introduction: Read the operating instructions...  
2. Operation: Read the operating instructions...  
3. Maintenance: Read the operating instructions...



SAFETY INSTRUCTIONS

- 1. Read the rest of safety instructions...  
2. Safety warnings: Read the safety instructions...  
3. Wear and maintenance: Never use the unit...  
4. Ventilation: Whichever you use...  
5. Electrical safety: Do not use the unit...  
6. Power supply: Connect the unit...  
7. Protecting the user: Do not use the unit...  
8. Cleaning: Clean the instrument...  
9. Disposal: Do not dispose of the unit...  
10. Transport: Do not transport the unit...  
11. Storage: Do not store the unit...

SPECTRO 320

Optical Spectrum Analyzer Release 4

Instruction Manual

INSTRUMENT SYSTEMS GmbH  
Neumarkter Straße 83  
81673 München, Germany  
Tel: +49-89-454943-0  
Fax: +49-89-454943-11

1	DESCRIPTION	1
1.1	Overview	1
1.2	Operating Instructions	1
1.3	Steps of Delivery	2
2	POSSIBLE CONNECTIONS	2
2.1	Measuring Apertures	7
2.2	Direct Spectrometric Connection	3
2.3	External Connection via Optical Waveguide	5
2.4	LED Adapter	3
3	USE OF COMPONENTS AND ACCESSORIES	8
3.1	Beam Trap	6
3.2	Diaphragm Plates	6
3.3	ISP Lid and Cover Glass	7
3.4	Sample Holder	9
4	MEASURING WITH THE ISP 80 INTEGRATING SPHERE	8
4.1	Reflective Measurements	9
4.2	Reflective Measuring System for Displays using DTSD6-100	14
4.3	Transmittance Measurements	16
5	TECHNICAL DATA	11
6	ORDERING NUMBERS	12

# ISP 80

## Integrating Sphere

## Instruction Manual

- 1. PREFACE
- 2. PUTTING INTO OPERATION

- 2.1 Installation Recommendations
- 2.2 First Measurements and

# TOP 100

- 3. INSTRUMENT DESCRIPTION

- 3.1 Functional Description
- 3.2 Handling and Operation
- 3.3 Optical Fiber - Exchange and Connection
- 3.4 Reflection Measurements with High Precision Top 100

## Optical Probe

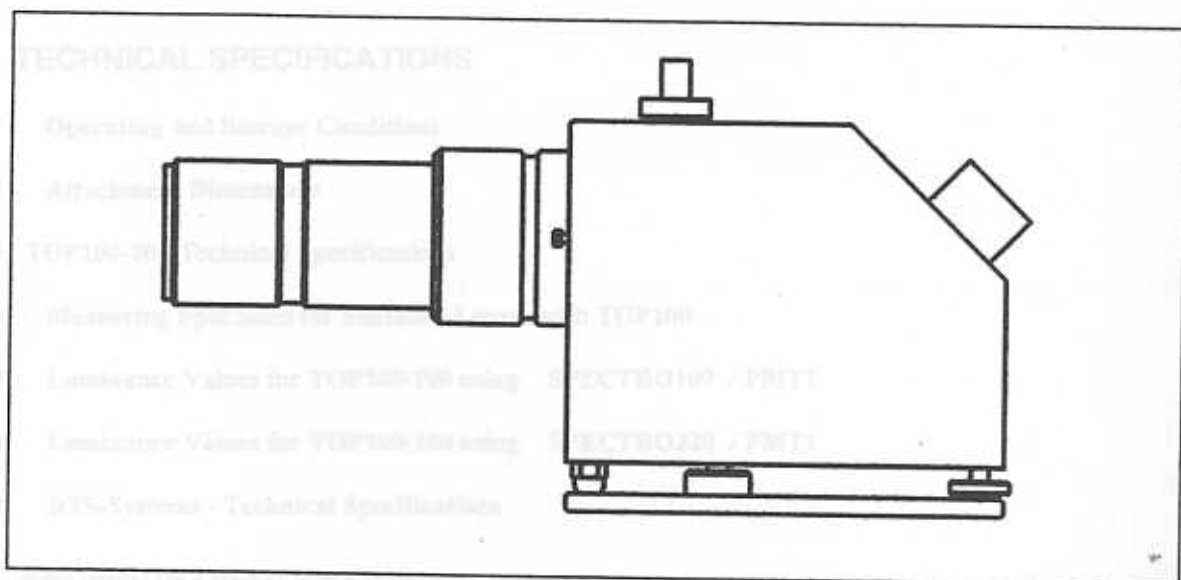
### User Manual

- 4. CALIBRATION

- 4.1 Delivery as a Calibrated System
- 4.2 Loss of Calibration

- 5. TECHNICAL SPECIFICATIONS

- 5.1 Operating and Storage Conditions
- 5.2 Attached Accessories
- 5.3 TOP100-30 Technical Specifications
- 5.4 Mounting Options for mounting on TOP100
- 5.5 Luminance Values for TOP100-100 using SPECTRO100 / PNTT
- 5.6 Luminance Values for TOP100-100 using SPECTRO200 / PNTT
- 5.7 DTS-System - Technical Specifications



- 6. CONFIGURATION EXAMPLES

- 6.1 Configuration Examples for High Spatial Resolution
- 6.2 Configuration Examples for Standard Applications

## INSTRUMENT SYSTEMS GmbH

Neumarkter Straße 83  
D - 81673 Munich  
Germany

Phone : ++49 - 89 - 454943 - 0  
Fax.: ++49 - 89 - 454943 - 11

Before you start using the software, it is important to understand the terms and abbreviations commonly used in the documentation.

The following table summarizes the type of information provided in the text.

Term/Label	Type of information
Text	General information, such as descriptions, examples, and diagrams.
Notes	Used to highlight important information or provide additional details.
Figures	Used to illustrate the concepts and data presented in the text.
Tables	Used to present data in a structured format.
Equations	Used to describe mathematical relationships and formulas.
Code	Used to show the source code of the software.

# SpecWin

## Spectral Software for Windows

### User manual

Version 2.0

INSTRUMENT SYSTEMS GmbH  
Neumarkter Str. 83  
D-81673 Munich, Germany  
[www.instrumentsystems.de](http://www.instrumentsystems.de)

Tel.: + 49 89-454943-0  
Fax: + 49 89-454943-11  
[info@instrumentsystems.de](mailto:info@instrumentsystems.de)