ISO 28902-1:2012-01 (E)

Air quality - Environmental meteorology - Part 1: Ground-based remote sensing of visual range by lidar

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 2

4 Symbols and abbreviated terms 4
4.1 Symbols 4
4.2 Abbreviated terms 6

5 Fundamentals of visual-range lidar 6
5.1 General 6
5.2 Concept of visual-range lidar measurements 9

6 Requirements 12
6.1 Measurement variables 12
6.2 Target variables 12
6.3 Specificationsandminimumrequirementsofperformancecharacteristics 12

7 Measurement planning and site requirements 17

8 Measurement procedure 18
8.1 General 18
8.2 Maintenance and operational test 18
8.3 Applications and measurement procedure 18

9 Signal evaluation 20
9.1 Klett-Fernaldalgorithm 20
9.2 Evaluation range 21
9.3 Uncertainty 21

10 Interferences 22

Annex A (informative) Alternative data evaluation 23

Annex B (informative)Calibrationbythemanufacturer 26

Annex C (informative)Furtherapplications 28

Bibliography 29