ANSI ACCREDITED
U.S. Technical Advisory Group

To be submitted no later than January 31 of the year following the reporting period.
Submit to: psa@ansi.org.

2012 Annual Report for the U.S. Technical Advisory Group (TAG) To ISO 172 Optics and Photonics

TC/SC/WG/PC # and title

Please provide the information requested herein in accordance with the requirements contained in *2.5.5 Maintenance of Accreditation* as found in the *ANSI International Procedures*.

1. TAG Administrator Organization Name: **Optics and Electro-Optics Standards Council**

2. Scope of the U.S. TAG:

   Standardization of terminology, requirements, interfaces and test methods in the field of optics and photonics.
   This includes complete systems, devices, instruments, ophthalmic optics, optical and photonic components, auxiliary devices and accessories, as well as materials. Optics and photonics are used in the meaning of generation, handling and detection of optical radiation including signal processing.
   Excluded :
   Standardization for specific items in the field of cinematography (ISO/TC 36), photography (ISO/TC 42), eye protectors (ISO/TC 94), micrographics (ISO/TC 171), fibre optics for telecommunication (IEC/TC 86) and electrical safety of optical elements, and general lighting.

3. Please attach current TAG membership list, including: Name, affiliation, voting status, interest category and complete contact information for each member, including the Chair and other officers: **Attached, by SC**

4. Please provide the definitions of interest categories applicable to TAG members

   General Interest
   Producer
   User/Industrial

5. Meetings:

   - Dates and locations (domestic and international) of all meetings of the TAG, TC and/or SC that took place in the past year:
   - If no meetings were held, please explain:
   - Dates and locations of all meetings of the TAG, TC and/or SC scheduled for the upcoming year: **See individual SC reports, below**

6. If applicable, this confirms the status of Head of Delegation Reports for the past year:

- ____Not applicable, no international meetings were held
- __X_Reports have already been submitted to ANSI
- ____Reports are attached
- ____Reports will be submitted by _________________________

7. Please list any problems encountered during the past year in the functioning of the U.S. TAG or U.S. TAG Administration, and any areas in which the U.S. TAG Administrator requires ANSI's assistance. *Note: for immediate assistance, please contact ISOT or* psa@ansi.org.

   ***S*ee individual SC reports, below.**

8. Complaints/appeals:
   - ___No complaints/appeals were submitted during this reporting period
   - _X _The following complaints/appeals were submitted during this reporting period; the status of each is described below:

9. Self-audits: Were any self-audits conducted?
   - ___Yes, the results are attached
   - _X_No

10. Annual Compliance Forms: A TAG Compliance Form will be issued in January of each year. It must be returned in accordance with the established deadline to confirm that the TAG's procedures are in compliance with the current edition of the *ANSI International Procedures.* Overdue Compliance Forms and Annual Reports from previous years, as well as any revisions to the procedures under which the TAG is accredited, are required to be submitted to ANSI as a condition of maintaining accreditation. If you have not already done so, please submit them now to psa@ansi.org.

Certification Statement

I, the undersigned, on behalf of the U.S. TAG to ____ISO TC 172_____________ certify that the TAG has been operating in a manner that complies with all applicable ANSI and ISO Procedures.

__Dave Aikens_______________________
(Name of TAG Administrator)

__Executive Director___________________
(Title)

__Optics and Electro-Optics Standards Council__
(Organization)

__PO Box 25705_________________________
(Street Address/P.O. Box)

__Rochester, NY 14625-0705______________
(City, State, Zip)

_860-878-0722__________585-377-2540______
(Telephone) (Fax)

_daikens@optstd.org____________
(Email)

ATTACHMENTS:

ANSI/OEOSC TAG to ISO/TC172/SC1 Annual report for 2012
ANSI/OEOSC TAG to ISO/TC172/SC3 Annual report for 2012
ANSI/OEOSC TAG to ISO/TC172/SC4 Annual report for 2012
ANSI/OEOSC TAG to ISO/TC172/SC5 Annual report for 2012
ANSI/OEOSC TAG to ISO/TC172/SC6 Annual report for 2012
ANSI/OEOSC TAG to ISO/TC172/SC7 Annual report for 2012
ANSI/OEOSC TAG to ISO/TC172/SC9 Annual report for 2012

Excel workbook - Roster of ANSI/OEOSC TAG to ISO/TC 172, by SC.

ANSI/OESC TAG to ISO/TC 172/SC 1 Annual Report for 2012

Prepared by TAG/SC 1 Leader: Dave Aikens

Number of Meetings Held during 2012: 1

Date: October 23-26, 2012

Location: St. Gallen, Switzerland

Number of Meetings Scheduled for 2013: 1

Location: NIST, Gaithersburg, MD

List any significant accomplishments for ANSI/OEOSC TAG/SC 1 this year.

Work continues on a suite of standards to address aspheric optics without an axis of rotational symmetry. This includes a new standard, CD 10110-19 for freeform optics, and significant revisions to ISO 10110-5 and -6 for form and centring notations respectively, and also amending ISO 10110-12 to allow new types of rotationally symmetric optics. ASC OP convened Task Force 5, Aspheric Optics, to monitor and participate in these efforts in conjunction with the TAG/SC1. The US continues to support the German delegation with comments and technical work on the standards.

The US currently leads a project to incorporate the ANSI/OEOSC OP1.002 scratch and dig method into the ISO standards ISO 10110-7 and ISO 14997. A WD has been submitted with the NP proposal, which is being circulated for balloting.

The US currently leads a project to extensively revise the general optics drawing notations standard and the standard for tabular drawings for optics, ISO 10110-1 and -10 respectively. The two standards will be combined into a single standard. A revised version of the WD will be submitted with the NP by the end of February.

The US currently leads a project to combine ISO 10110-2, -3, and -4 into a single material imperfection standard, including a new set of notation for raw optical glass properties, ISO 12123. The new standard is expected to be ISO 10110-18. A draft WD is due from the project leader by the end of January.

The US successfully led an effort to resolve to revise ISO 10110-9 to be consistent with new versions of ISO 9211-1, -2, -3 and -4. Germany will lead this project with US support. The US has also encouraged a vote to revise ISO 10110-11, defaults, and hopes to lead that project in 2014.

The US (via ANSI) has offered to host a joint SC 1/SC 3 meeting at NIST in Gaithersburg MD in September 2013.

List any problems encountered by the ANSI/OEOSC TAG/SC 1 during the year

We continue to lack representation in SC1 WG3, due to a lack of available experts in environmental standards and testing.

ANSI/OESC TAG to ISO/TC 172/SC 3 Annual Report for 2012

Prepared by TAG/SC 3 Leader: Gordon Boultbee

Number of Meetings Held during 2012: 0

Date: N/A

Location: N/A

Number of Meetings Scheduled for 2013: 1

Location: NIST, Gaithersburg, MD

List any significant accomplishments for ANSI/OEOSC TAG/SC 3 this year.

ASC OP formed TF 6 to address standards pertaining to IR materials, which at the ISO level are addressed by SC 3 WG 3.

The US voted not to advance ISO/CD 17328, *Test method for refractive index of infrared optical materials*, to the DIS stage. Although the US was the only member body (MB) that voted against advancing the CD, our comments were so extensive that the SC 3 secretariat decided to have a second draft of the CD prepared by the project leader for a revote. The US voted in favor of the second draft of the CD with additional comments.

The US voted in favor of advancing ISO/CD 17411, *Test method for homogeneity of optical glasses by laser interferometry*, to the DIS stage, with comments.

The US agreed to a draft resolution to hold a joint SC 1/SC 3 meeting at NIST in Gaithersburg MD in September 2013.

List any problems encountered by the ANSI/OEOSC TAG/SC 3 during the year

None.

ANSI/OESC TAG to ISO/TC 172/SC 4 Annual Report for 2012

Prepared by TAG/SC 1 Leader: none

Number of Meetings Held during 2012: 0

Number of Meetings Scheduled for 2013: 0

List any significant accomplishments for ANSI/OEOSC TAG/SC 4 this year.

No US Experts were available to participate this year, so the US abstained on all work items.

List any problems encountered by the ANSI/OEOSC TAG/SC 4 during the year

The chairman of SC4 passed away unexpectedly this year, which has caused all work to stop in the committee. We expect GOST to propose a new chairman.

We continue to search for an appropriate representative for SC4. Two people have expressed interest, and we are hoping to have their input in future standards work.

ANSI/OESC TAG to ISO/TC 172/SC 5 Annual Report for 2012

Prepared by TAG/SC 5 Leader: Stanley Schwartz

Number of Meetings Held during 2012: 1

Date: September 4-7 2012

Location: Zurich, Switzerland

Number of Meetings Scheduled for 2013: 1

Date: September 3-6 2013

Location: Hangzhou, China

At Zurich Meeting 39 participants from 6 countries

Significant Progress of Work

Since the last meeting of SC 5, the following progress was made:

- Vote ISO/NP TS 18339 and 18340 finished (WG-6 draft being revised, to be worked on in 2013)
- ISO/NP 18221 adopted (WG-3 working on for 2013 meeting)
- ISO/AWI 19012-3 registered (WG-9 working on for CD ballot for 2013 meeting)
- ISO/DIS 19012-1 submitted for vote WG-9 (changes accepted, go to final vote in 2013)
- ISO/DIS 8600-1 ballot initiated (WG-6 will be submitted for FDIS)
- ISO/DIS 8039 submitted for publication (currently PRF stage)
- ISO 19012-2 corrected (confirmed to be published)
- ISO 8578 published (WG-9)
- ISO 9345-1 published (WG-3)
- ISO 8600-7 published (WG-6)
- ISO 8039 published (WG-3)

Summary

- Four (4) standards were published since the 2011 meeting:
- Eight (8) standards are under systematic review;
  - Three (3) were confirmed without change
  - Five (5) were assigned to working groups for revision at the SC5 meeting
- Eight (8) Active Projects (Standards under development or review of standards needing slight revision
- Two (2) NWIP projects were further presented by national delegations and moved forward to NWI Ballot status.
  - Microscopes-Minimum requirements for binocular tubes
  - Microscopes-Definition and measurement of illumination properties; Part 1: Image brightness and uniformity

- Three (3) new projects from last meeting were to be continued and drafts revised
    - Microscopes- with digital imaging displays
    - Endoscopes-Optical funnel and light guide connector
    - Endoscopes-Endotherapy devices
- There were no additional items to be added

Member changes

- Yutaka Otani informed WG 6 in advance that he will retire as WG 6 convenor. WG 6 recommended Toshio Nakamura as its new convener. The subcommittee agreed to appoint him as new WG 6 convener with unanimity.
- Ruedi Rottermann announced that he will retire as convener of WG-3 in spring 2015 and thus, in 2014 a new convener has to be appointed.
- The Secretariat of SC5, Mr. Joachim Franck announced that he will leave DIN by 2012-10-31. Thus, Elisabeth Leitner will remain SC 5 secretary for the near future. Ms. Helene Fateev has been appointed as new project manager to assist E. Leitner.
- Please be advised of the following new US expert to TC172/SC5: WG-6
  Mr. Dennis Leiner
  Lighthouse Imaging, LLC

Subsequent meeting

- The secretariat will try to arrange the 2013 meeting in Hangzhou, China. The meeting date will be the beginning of September 3-6 2013
- The German delegation volunteered to host the 2014 meeting. The definite decision on the 2014 meeting will be made at the 2013 meeting.

List any problems encountered by the ANSI/OEOSC TAG/SC 5 during the year
Again due to personnel changes during 2012/2013, SC5 will experience turnover in the Secretariat and WG convener positions. Never the less, efficiency in meeting management and organization is not expected to be greatly affected and will no doubt improve over time.

At the International meeting, (Stanley Schwartz) was the only US representative for TC172/SC5 / **WG3 + 9**. The US delegation for these WG's should have additional experts / representatives. I have tried to recruit additional experts from academics to support the voice of the user. Additional members should be officially recruited for the next meeting.

ANSI/OESC TAG to ISO/TC 172/SC 6 Annual Report for 2012

Prepared by TAG/SC 1 Leader: none

Number of Meetings Held during 2012: 1

Location: Munich, Germany

Date: October, 2012

Number of Meetings Scheduled for 2013: 1

Location: TBD, Spain

Date: TBD

List any significant accomplishments for ANSI/OEOSC TAG/SC 6 this year.

No US Experts were available to participate this year, so the US did not vote on all work items.

List any problems encountered by the ANSI/OEOSC TAG/SC 6 during the year

We continue to lack an appropriate representative for SC6. The appropriate American companies (Stanley, Johnson, etc) have been contacted, but cannot provide any support at this time. We will continue to search for a participant in 2013.

ANSI/OEOSC TAG to TC172/SC7 Annual Report for 2012

January 19, 2013

Prepared by TAG/SC7 Leader: Jeff Endres

Number of Meetings Held during 2012: 3

- TC172 SC7 Plenary Meeting - Milan, Italy in March 2012
- WG3 – Spectacle lenses – project groups met in Clearwater, Florida in December, 2012
- WG9 – Contact lenses - met in London, UK in December, 2012

Number of Meetings Scheduled for 2013: 1

- TC172 SC7 Plenary Meeting – Berlin, Germany in October 2013

List any significant accomplishments for ANSI/OEOSC TAG/SC7 this year.

- NWIP (New Work Item Proposals) - 14
    - WG2 - 1
    - WG3 - 4
    - WG6 - 3
    - WG7 - 2
    - WG9 - 4
- CD (Committee Drafts) - 6
    - WG6 - 2
    - WG7 - 3
    - WG9 - 1
- DIS (Draft International Standards) - 12
    - WG3 - 1
    - WG6 - 2
    - WG7 - 5
    - WG8 - 2
    - WG9 - 1
    - WG10 - 1
- FDIS (Final Draft International Standards) - 12
    - WG2 - 2
    - WG3 - 1
    - WG6 - 3
    - WG7 - 2
    - WG8 - 2
    - WG9 - 1
    - WG10 - 1
- Systematic review - 8
    - WG3 - 4
    - WG6 - 2
    - WG7 - 1
    - WG9 - 1

  - TR (Technical Reports) - 2
    - WG2 - 1
    - WG10/WG3 - 1

Highlights and overview of WG work within SC7

WG1 – Terminology - This group did not meet in 2012.

WG2 – Spectacle frames

- Worked proceeded internationally on NWIP ISO8624:2011 Ophthalmic optics – Spectacle frames - Measuring system and terminology
- The group voted to approve ISO/DTS 24348 – Ophthalmic optics – Spectacle frames, for the work regarding nickel release from frames.
- The group through its liaison reviewed and contributed to ISO/FDIS4007 Personal protective equipment – Eye and face protection – Vocabulary. This liaison document was made in conjunction with ISO TC94/SC6, and begun in 2007.

WG3 – Spectacle lenses

- The systematic review of International Standards; ISO 21987:2009, IS 16034:2002, ISO 8980-1,2:2004
- Multiple NWIP proposals for Transmission specifications and test methods, specifications for single-vision and multifocal lens blanks, as well as ISO 13666 Vocabulary, and ISO 14889: Spectacle lenses - Fundamental requirements for uncut finished.
- Experts from this group contributing to the ANSI position on the TR for Free Form.

WG6 - Ophthalmic instruments and test methods –

- The active work in Working Group 6 is on the revision of ISO 10938 – which now includes not only visual acuity chart projectors but other more modern methods of visual acuity testing plus an annex on correlating optotypes to the standard optotype
- Multiple NWIP were begun in 2012 including the topics of Minimal Legible Font, and Particular requirements for the basic safety and essential performance of lens removal devices and vitrectomy devices for ophthalmic surgery.

WG7 – Ophthalmic implants

- The working group continues efforts on the revision of various parts of the International Standard for intraocular lenses with the view of incorporating requirements for multifocal intraocular lenses and accommodating intraocular lenses – types of intraocular lenses that the current standard does not cover.
- Based on reported problems with endotoxins that inadvertently made their way in some IV fluids and subsequently caused some eye inflammation following their use in ophthalmic surgery, this issue continues to be under review by the working group.
- Topics include Shelf Life and Transport stability.

WG8 – Data Interchange

- The last of the three part standard for an electronic catalog for spectacle frames and their identification was presented for vote as an FDIS this last year. This work has been done as a joint effort with WG2.

WG9 – Contact Lenses

- There were 4 NWIP within WG9 for the year 2012. The topics include Contact Lens Care products – shelf life, cytotoxicity, labeling, and a method to assess contact lens care products with contact lenses in a lens case challenged with bacterial and fungal organisms.
- Of particular note is the work related to ocular infections involving the acanthamoeba organism, much work has been devoted to devising an appropriate method of assessing the ability of various contact care solutions to provide protection against this disorder.
- Also associated with these points above was the continued work on ISO 11980 which deals with guidance for clinical investigations

WG10 - Devices for dioptric power measurement of lenses

- The primary work of WG10 remains the revision of ISO 8598 – Focimeters.
- Due to the efforts of this group the FDIS 8598-1 ballot was defeated and the document will likely be returned to Committee for further work
- This group has also contributed to the recent technical Report group “TR Freeform lenses technology and measurement."

List any problems encountered by the ANSI/OEOSC TAG/SC 5 during the year:
Personnel change has occurred during 2012, SC7 experienced turnover in the assistant TAG leader to TC172/SC7 – Ophthalmic Optics, as Charlie Campbell was replaced in this volunteer position by Jeff Endres.

ANSI/ TAG to ISO/TC 172/SC 9 Annual Report for 2012

Prepared by: Thomas Lieb, SC9 US Delegation Leader

SC 9 - Electro-optical Systems (Lasers)
WG1 - Terminology and Test Methods for Lasers
WG2 - Interfaces and System Specifications for Lasers
WG3 - Safety
WG4 - Laser Systems for Medical Applications
WG5 - Laser Systems for General Applications
WG6 - Optical Components and their Test Methods
WG7 - Electro-optical Systems Other than Lasers
Parent Organization **ANSI**

Meetings in 2012
ISO/TC 172/SC 9- plenary held in Nara/Japan on 2012-02-21 and 2012-02-23
meeting was attended by 32 participants from 8 P-members.
WG1 - 1, held in conjunction with ISO/TC 172/SC9, Nara Japan,
WG3 - 1, held in conjunction with IEC/TC 76/JWG 10, Didcot, UK
WG4 - 1, held in conjunction with ISO/TC 172/SC9, Nara Japan
WG6 - 1, held in conjunction with ISO/TC 172/SC9, Nara Japan
WG7 - work Conducted prior to Nara, and report submitted to plenary

Meetings planned for 2013
ISO/TC172/SC9 plenary, working groups and project groups, will meet at the premises of NIST in Gaithersburg, MD, USA, 2013 Sept. 9 - 11.
ISO/TC 172/SC 9/WG 3 will meet with counterpart **IEC/TC 76/JWG 10** in Frankfurt, Germany, September 24, 2013

Work of SC9 in 2012

During the course of the year the work of the various working groups, as represented by the documents prepared and voted on, (By date/ Document Number) was as follows:
N459 ISO Comments template 5860 sc9N459.pdf
N459: ISO/DTS 17915: Optics and photonics - Measuring method of laser diodes for sensing.
N458 ISO Comments template 5859 sc9N458.pdf
N458: ISO/CD 17901-2: Optics and photonics - Holography - Part 2: Methods for measurement of hologram recording characteristics.
N457 ISO Comments template 5858 sc9N457.pdf

N457: ISO/CD 17901-1: Optics and photonics - Holography - Part 1: Methods of measuring diffraction efficiency and associated optical characteristics of holograms.

N456 ISO Comments template 5857 sc9N456.pdf

N456: ISO/CD 11151-2: Lasers and laser-related equipment - Standard optical components - Part 2: Components for the infrared spectral range.

N455 ISO Comments template 5856 sc9N455.pdf

N455: ISO/CD 11151-1: Lasers and laser-related equipment - Standard optical components - Part 1: Components for the UV, visible and near-infrared spectral ranges.

Proposed US ballot

Proposed US comments

2012 Systematic Review of ISO 11810-2:2007

Ballot 5793 sc9SR2012ISO11810_2.pdf

(2012 Systematic Review of ISO 11810-2:2007 (vers 2) Lasers and laser-related equipment -- Test method and classification for the laser-resistance of surgical drapes and/or patient-protective covers -- Part 2: Secondary ignition

Proposed US ballot

Proposed US comments

2012 Systematic Review of ISO 11810-1:2005

Ballot 5792 sc9SR2012ISO11810_1.pdf

2012 Systematic Review of ISO 11810-1:2005 (vers 2) Lasers and laser-related equipment -- Test method and classification for the laser resistance of surgical drapes and/or patient protective covers -- Part 1: Primary ignition and penetration

Proposed US ballot

2012 Systematic Review of ISO 11145:2006

Ballot 5791 sc9SR2012ISO11145.pdf

2012 Systematic Review of ISO 11145:2006 (Ed 3, vers 2) Optics and photonics -- Lasers and laser-related equipment -- Vocabulary and symbols

N454 ISO Comments template 5785 sc9N454.pdf

N454: ISO/WD 13142: Optics and photonics — Electro-optical systems — Cavity ring-down technique for high reflectance measurement (for comment)

N453 5652 sc9N453.pdf

N453: (CEN CONSULTANT) Enquiry assessment of prEN ISO 11553-3.

N452 639 sc9N452.pdf

N452: REPORT OF VOTING ON ISO/DIS 11553-3.2: Safety of machinery -- Laser processing machines -- Part 3: Noise reduction and noise measurement methods for laser processing machines and hand-held processing devices and associated auxiliary equipment (accuracy grade 2).

N451 5638 sc9N451.pdf

N451: 2012 Report of Secretariat presentation at Nara meeting.

N450 5637 sc9N450.pdf

N450: Report on the plenary meetings of ISO/TC 172/SC 9 in Nara/Japan on 2012-02-21 and 2012-02-23. (Comments by 6/21/12)

N449 5596 sc9N449.pdf

N449: Result of voting on NWIP: ISO 13142 Electro-optical systems – Cavity ring-down technique for high reflectance measurement.

N448 5595 sc9N448.pdf

N448: Result of voting on NWIP: ISO 17935 Optics and photonics — Lasers and laser-related equipment — Specification of surface cleanliness.

N447 5594 sc9N447.pdf

N447: Result of voting on NWIP: ISO 17901-2 Optics and photonics - Holography - Part 2: Methods for measurement of hologram recording characteristics.

N446 5593 sc9N446.pdf

N446: Result of voting on NWIP: ISO 17901-1 Optics and photonics - Holography - Part 1: Methods of measuring diffraction efficiency and associated optical characteristics of holograms.

N445 5592 sc9N445.pdf

N445: Result of voting on NWIP: ISO/TS 17915 Optics and photonics - Measuring method of semiconductor lasers for sensing.

US position: Agree, no comments

ISO/DIS 11553-3.2 ISO Comments template 5585 sc9DIS11553_3_2.pdf

ISO/DIS 11553-3.2: Safety of machinery — Laser processing machines — Part 3: Noise reduction and noise measurement methods for laser processing machines and hand-held processing devices and associated auxiliary equipment (accuracy grade 2).

Report of voting 5584 sc9DIS11553_3RepVote.pdf

Report of voting on ISO/DIS 11553-3: Safety of machinery — Laser processing machines — Part 3: Safety requirements for noise reduction and noise measurement methods for laser processing machines and hand-held processing devices and associated auxiliary equipment (accuracy grade 2). (includes Explanatory Report)

N444 5581 sc9N444.pdf

N444: *REVISED* Notice of meeting/Draft agenda for TC172/SC9 meetings in Nara, Japan (Feb 21-23, 2012).

N443 5572 sc9N443.pdf

N443: **Revised practical hotel information for the next meetings of ISO/TC 172/SC 9**.

N442 5564 sc9N442.pdf

N442: RESULT OF SYSTEMATIC REVIEW OF ISO STANDARD: ISO 14880-1 Optics and photonics -- Microlens arrays -- Part 1: Vocabulary.

N441 5563 sc9N441.pdf

N441: RESULT OF SYSTEMATIC REVIEW OF ISO STANDARD: ISO 14881 Integrated optics -- Interfaces -- Parameters relevant to coupling properties.

N440 5562 sc9N440.pdf

N440: RESULT OF SYSTEMATIC REVIEW OF ISO STANDARD: ISO 11807-2 Integrated optics -- Vocabulary -- Part 2: Terms used in classification.

N439 5561 sc9N439.pdf

N439: RESULT OF SYSTEMATIC REVIEW OF ISO STANDARD: ISO 11807-1 Integrated optics -- Vocabulary -- Part 1: Basic terms and symbols.

N438 5549 sc9N438.pdf

N438: NOTICE OF MEETING / DRAFT AGENDA (includes Practical and Registration information) for the next meetings of ISO/TC 172/SC 9 and its working groups in Nara/Japan in February 2012. (

N437 5548 sc9N437.pdf

N437: Report of Secretariat ISO/TC 172/SC 9 Electro-optical systems Reporting period 2010-11 to 2011-11.

N435 Ballot 5539 sc9N435.pdf

N435: NWIP: Optics and photonics — Lasers and laser-related equipment — Specification of surface cleanliness.Proposed US Ballot

N434 Ballot 5534 sc9N434.pdf

N434: NWIP: ISO/TS xxxxx: Optics and photonics — Measuring method of semiconductor lasers for sensing. Proposed US Ballot