



DARMSTADT
UNIVERSITY OF
TECHNOLOGY



2001 **PAL**®

PROGRESS IN AUTOMOBILE LIGHTING

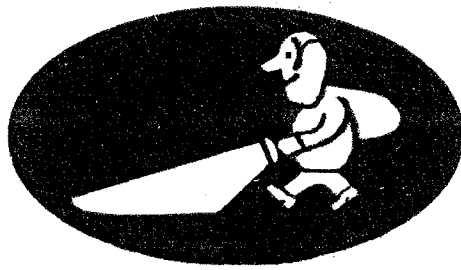
Laboratory of Lighting Technology

September 25-26, 2001



DOCKET
A L A R M

Find authenticated court documents without watermarks at docketalarm.com.



2001 PAL[®]

Progress in Automobile Lighting

Proceedings of the Symposium

Darmstadt University of Technology
Laboratory of Lighting Technology

Published by

Prof. Dr.-Ing. H.-J. Schmidt-Clausen

in the Series

Darmstädter Lichttechnik

Herbert Utz Verlag Wissenschaft

München

ISBN 3-89675-971-X

PAL '01: 2 Volumes, Vol. 8 & Vol. 9; not to be sold separately

Die Deutsche Bibliothek – CIP-Einheitsaufnahme
Ein Titeldatensatz für diese Publikation ist
bei Der Deutschen Bibliothek erhältlich

ISBN 3-89675-971-X

Das Werk ist urheberrechtlich geschützt. Die dadurch begründeten Rechte, insbesondere die der Übersetzung, des Nachdrucks, der Entnahme von Abbildungen, der Funksendung, der Wiedergabe auf photo-mechanischem oder ähnlichem Wege und der Speicherung in Datenverarbeitungsanlagen bleiben, auch bei nur auszugsweiser Verwertung, vorbehalten.

Die Wiedergabe von Gebrauchsnamen, Handelsnamen, Warenbezeichnungen usw. in diesem Werk berechtigt auch ohne besondere Kennzeichnung nicht zu der Annahme, daß solche Namen in Sinne der Warenzeichen- und Markenschutz-Gesetzgebung als frei zu betrachten wären und daher von jedermann benutzt werden dürften.

Copyright © 2001 Herbert Utz Verlag GmbH

Herbert Utz Verlag GmbH, München
Tel.: 089-277791-00
Fax: 089-277791-01
utz@utzverlag.de
www.utzverlag.de

Content	page
Werner Adrian: University of Waterloo, Canada Visual Acuity and its Dependency on Observation Time and Contrast	1
Yukio Akashi: Lighting Research Center, USA The effect of oncoming headlight glare on peripheral detection under a mesopic light level	9
Daniel Armbruster: F. Porsche AG, Germany Motor vehicle signal lamps in a fog environment	23
Gerd Bahnmüller: Automotive Lighting Reutlingen GmbH, Germany Headlamp Development - Reduced Time to Market	28
Gerhard Bierleutgeb: Hella KG Hueck & Co., Germany Interior Lighting Control (ILC) System Aspects for a New Approach	35
Werner D. Bockelmann: Ophthalmologist, Germany Coloured head-down displays (HDD) from the point of view of information transfer	43
Doris Boebel, Automotive Lighting, Germany Signal Image in PES Systems	49
Christian Boehlau: Hella KG Hueck & Co., Germany Optical Sensors for AFS – Supplement and Alternative to GPS	56
Gary Brown: Mira, UK Integrating Pedestrian Impact Protection into Future Headlight Design	61
Berthold Büdel: Audi AG, Germany Clear lenses for lighting components – The actual trend and its problems	74
John D. Bullough: Rensselaer Polytechnic Institute, USA Forward Vehicular Lighting and Inclement Weather Conditions	79
Michael Burg: Hella KG Hueck & Co, Germany Infrared Headlamps for Active Night-Vision Systems	90
Tso-Wei Chang: Lunghwa Institute of Technology, Taiwan Driving Performance Analysis on Interactions among Factors of Center High Mounted Stop Lamp and Road Environment	99
Christophe Chenevier: Valeo Lighting Systems, France Thermal Simulation in Lighting Systems – 5 Days / 5 Degrees	109
Andreas Chudaska: Hella KG Hueck & Co., Germany Headlamp Cleaning Systems – Trends of Development and Future Demands	119
Sharon Cook: Loughborough University, UK Warning beacon intensity	127

Content	page
Francesco Cortese: St Filippo Neri's Hospital, Italy Biological and Statistical Profile of Road Accidents Victims in an Urban Area A One-Year Experience in a Major Hospital	138
Thomas Dahlem: Volkswagen AG, Germany Physiological Investigation of the Proportioning of Headlamp Illumination	155
Maria Teresa Dalmasso: Automotive Lighting, Italy Signal LAMPs with hidden light sources	164
Joachim Damasky: Hella KG Hueck & Co., Germany Trends in Auxiliary Car Lighting and the Influence on OE Development	173
Ad de Visser: Philips Lighting B.V., The Netherlands Activities of CIE relevant to automotive lighting	186
Detlef Decker: Hella KG Hueck & Co., Germany Aspects of dynamic light control in automotive applications	196
Christophe Dubosc: Valeo Lighting Systems, France Lighting Systems and Show Cars	206
Alexis Dubrovin: Valeo Lighting Systems, France Optimised Lighting Systems Architecture	224
Martin Enders: BMW Group, Germany Pixel Light	234
Jürgen Ewald: Nippon Carbide Industries B. V., The Netherlands Visual Performance of Fluorescent Retroreflective Sheeting	240
Frank Ewerhart: Robert Bosch GmbH, Germany Video Based Curve Light System – Sensor, System and Results	252
Matthias Fiegler: OSRAM GmbH, Germany PLANON, a mercury-free flat panel light source, with high potential for automotive applications	266
Michael J. Flannagan: The University of Michigan, USA Feasibility of Developing a Headlighting Rating System	275
Helmut Frank: Mechatronic, Germany New Aspects for the Photometric Characterisation of Microprismatic Retroreflective Sheeting	283
Gianpiero Fusco: Automotive Lighting, Italy Headlamps Beam Patterns Evaluation by CCD Camera	309
Takashi Futami: Stanley Electric Co.,Ltd., Japan Development of the "Gatling Beam" Headlamps	316

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.