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August 28, Morning  
9:00 - 12:30

Session 1  
( Fluorescent Lamps )  
Chairman : R. Itatani

- 1:I    Lighting Industries in Japan ( Introductory Lecture )  
      T.Hanada
- 
- 2:I    Low Power Compact Electrodeless Lamps  
      D.O.Warmby, S-A El-Hamamsy
- 3:L    Measurement on The Philips QL-Lamp for Comparison with  
      The Developed Model  
      J.Jonkers, M.Bakker, J.A.M.van der Mullen, D.A.Benoy,  
      K.T.A.Burm, D.C.Schram
- 4:P    Bistable Dimming Behavior of Fluorescent Lamps Caused by  
      Electron-Attaching Contaminants  
      J.F.Waymouth
- 5:P    Starting Time Measurement of Non-preheated Electronic  
      Compact Fluorescent Lamps  
      T.Yasuda, H.Ito
- 6:P    Thermionic Emission Characteristics of Preheated Cathode  
      Fluorescent Lamps  
      M.Myojo, I.Okuno
- 7:P    Effect of Anode Current on The Position of Cathode Hot Spot  
      Li Xianli
- 8:P    Investigation on The Electron Energy Spectrum of Compact  
      Fluorescent Lamps  
      N.L.Bashlov, V.M.Milenin, G.Ju.Panasjuk, N.A.Timofeev
- 9:P    Investigation on The Electrokinetic Characteristic of  
      Compact Fluorescent Lamps  
      N.L.Bashlov, V.M.Milenin, G.Ju.Panasjuk, N.A.Timofeev
- 10:P    Low Power Super Compact Fluorescent Lamps with Higher  
      Luminous Efficacy  
      Daoyu Fang, Shenghe Song

- 11:P    Improvement of The Starting Property of The Electrodeless  
Fluorescent Lamps in Dark Ambient  
M.Kotani, M.Shinomiya, M.Myojo, T.Namura
  
- 12:P    Characteristics of Plasma in RF Electrodeless Discharge  
I.Mogi, Y.Yabumoto, G.Kanai, T.Kawabe
  
- 13:P    Control of UV Radiation Emitted from Fluorescent Lamps  
J.Kachidza, P.K.Whitman
  
- 14:L    Performance Advantages of A Helical Compact Fluorescent  
Lamp  
T.F.Soules, J.I.Barry, E.G.Steinbrenner, L.Kicher

**August 28, Afternoon**

**13:30 - 17:00**

**Session 2**

**( Electronics and Related )**

**Chairman : John F. Waymouth**

- 15:I Progress in Electronic Devices for Lamp Operation**  
H.Nishimura
- 16:L Experimental Study of The Fluorescent Lamp with An Electronic Dimmer Controller**  
Guan-Chyun Hsieh, Eel-Peeng Tsai, Ping-Shen Sung
- 17:P The Starting Situation of The Fluorescent Lamp Operated by The Electronic Ballast**  
T.Uetsuki, N.Hayashida
- 18:P Circuit Model of Fluorescent Lamp at High Frequency Operation**  
M.Taihei, T.Urayama
- 19:P The Effect of The Operating Frequency on The Dynamics of The Barium Emissions and The Electrode Temperature of A Fluorescent Lamp**  
K.Misono, Joseph T.Verdeyen
- 20:P Color Control of Fluorescent Lamps**  
M.Aono, M.Jinno, M.Kubo, R.Itatani
- 21:P Design Considerations for Color Temperature Variable Fluorescent Lamps**  
S.Tanimizu, A.Kougami
- 22:P Mode Transition in An Inductively Coupled Discharge**  
M.Monte, M.Matsuoka, M.Kawaguchi
- 23:P A Study on Tri-Phase Source for Mass-using Discharge Lamps**  
Liancai Wang, Lixi Yan, Quingshan Zeng, Yongzhi Pang, Zhezhang Wang
- 24:P HPS Lamps without Mercury in Pulse-Current Operation**  
F.Serick, H.Kaase

25:L Built-in Starter with Pulse Cut-out for HID Lamps  
S.Sasaki, T.Iida, R.Loane

26:I Electronic Optimization of HID Lamps  
K.Günther

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Session 3

( HID Lamps )

Chairman : Brian M. Ditchek

- 27:I High Intensity Discharge Lamps with Ceramic Envelopes  
P.A.Seinen
- 28:L Short Arc Metal Halide Lamp with New Ingredients for LCD  
Projector  
N.Takeuchi, Y.Kitahara, M.Wakamiya
- 29:P Characteristics of Ceramic Metal Halide Lamps and Its  
New Construction  
M.Ichise, H.Haraguchi, S.Yamazaki
- 30:P Analysis of The Starting Condition for Metal Halide Lamp  
M.Hirabayashi, Y.Kenmotsu, H.Takahashi, M.Sone
- 31:P Analysis of The Time-dependent Temperature Distribution of  
Compact MH Lamps during Warm-Up Phase  
T.Saitoh, Y.Kurimoto, Y.Tsutsui
- 32:P Life Performance Improvement of The Short Arc Metal Halide  
Lamp by DC Operation  
T.Higashi
- 33:P Interaction between Arc-tube Radiation and Barium Film in  
A High Pressure Sodium Lamp  
C.Carretti, S.P.Giorgi, P.Manini, A.Renzo
- 34:P Factors Influencing The Minimum Arc Sustaining Current  
W.Yan, F.P.Dawson
- 35:P Progress in Sulfur Lamp Technology  
B.P.Turner, M.G.Ury, D.A.MacLennan, Y.Leng
- 36:P Low Power Microwave Discharge in Sulfur Lamps  
A.N.Didenko, G.A.Lyakhov, K.F.Shipilov, E.A.Vinogradov
- 37:P Pulsating Operation of Electrodeless HID Lamp  
K.Shimizu, I.Yokozeki, K.Uemura, A.Ito, A.Inouye

- 38:P Extrapolation of Radial Temperature Profile in High Pressure Mercury Lamps  
B.Freisinger, G.Hartel, H.Schöpp
- 39:P Utilization of HID Illumination in Medical Diagnostics and Treatment  
C.N.Stewart, D.M.Rutan, W.H.Lagerway,
- 40:P On The Calculation of The Mercury Distribution in Vertically Operating High Pressure Mercury Discharge Lamps  
K.Charrada, G.Zissis
- 41:L The Ignition Characteristics of Electrode-less HID Lamp  
S.Ukegawa, S.Wada, A.Okada, M.Kotani
- 42:I Novel Microwave Powered High Intensity Discharge Lamps  
W.P.Lapatovich



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Session 4

( Excimer, Dielectric Barrier Discharge and Xe Discharge )

Chairman : A.G.Jack

- 43:I Recent Progress of Excimer Radiation  
- Research, Development and Application -  
M.Obara
- 44:L A Flat Fluorescent Lamp with Xe Dielectric Barrier  
Discharges  
T.Urakabe, S.Harada, T.Saikatsu, M.Karino
- 45:P Development of Ar, Kr Excimer Lamps Using Dielectric Barrier  
Discharge  
H.Sugahara, Y.Ohnishi, H.Matsuno, T.Igarashi, T.Hiramoto
- 46:P Measurement of Single-Excimer-Filaments in A Barrier  
Discharge at Various Frequencies and Different Mixtures  
S.Kaiser, H.P.Popp, E.Arnold, K.J.Dietz, A.Hofman
- 47:P Dynamics of The Discharge Pumping in An ArF Excimer Laser  
S.Nagai, H.Sano, H.Furuhashi, Y.Uchida, J.Yamada, A.Kono,  
T.Goto
- 48:P Multifrequency Laser Emission for Illumination Generated by  
Four-wave Raman Mixing  
H.Kawano, T.Imasaka
- 49:P The Relationship between Radiant Efficiency and E/P in XeCl,  
KrCl Dielectric Barrier Discharge Lamps  
Y.Aiura, H.Matsuno, T.Igarashi, T.Hiramoto
- 50:P Investigation of The Electrical and Optical Properties of  
Dielectric Barrier Discharges  
S.Müller, R.J.Zahn
- 51:P Modeling of Barrier Discharge Excimer Lamp  
A.Oda, Y.Sakai, P.Ventzek, H.Tagashira, H.Matsuno,  
T.Igarashi

- 52:P The Pulse Discharge Sources with VUV Continuous Spectrum  
Radiation  
Shaolong Zhu, Xiaoyong Zhou, Wei Zhou
- 53:P Doped and Undoped Xenon Short Arc Lamps with Extremely High  
Spectral Radiance  
E.Smolka, A.Schnabl, F.Schilling
- 54:P High-Radiance Lamps  
T.Hiramoto
- 55:L Density of Excited Atoms and VUV Radiation in The Pulsed  
Xenon Medium Pressure Discharge  
E.Kindel, C.Schimke
- 56:I Empirical Modeling of Lamp Characteristics for Design and  
Process Improvement  
B.Preston

**August 30, Morning**

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**Session 5**

**( Modelling )**

**Chairman : R. Devonshire**

- 57:I Review of Discharge Modelling**  
G.G.Lister
- 58:L HID-Modeling and Experimental Assessment**  
H.G.Adler, R.W.Liebermann, R.Speer
- 59:I Collisional-Radiative Model and Low Pressure Discharge :  
Population of Excited Atoms and Ionization Balance**  
T.Fujimoto
- 60:P Self-Consistent Finite Element Modelling of Axisymmetric  
High-Pressure Discharge Lamps**  
H.Wiesmann, M.Neiger
- 61:P The Development of The Simulation System for Analyzing  
HID Lamps**  
H.Takahashi, H.Azegami, M.Sone, Y.Kenmotsu
- 62:P Computer Model of The Gas Discharge in A Deuterium Lamp**  
G.R.Harris, A.Hartley, R.Devonshire
- 63:P An Investigation of The High Pressure Sodium Arc Simulation  
Model with Energy Balance Equations**  
T.Ishigami
- 64:P Experimental Modeling of The Fluorescent Lamp**  
Guan-Chyun Hsieh, Ping-Shen Sung, Eel-Peeng Tsai
- 65:P Analysis of The Inductively Coupled Electrodeless Discharge  
by The Equivalent Circuit**  
Y.Watanabe, H.Miyazaki
- 66:P Modelling of The Philips QL-Lamp**  
D.A.Benoy, K.T.A.Burm, J.Jonkers, J.A.M.van der Mullen  
D.C.Schram

- 67:P Halogen Lamp Computer Model Incorporating LTCE and Species Diffusion  
P.Heeley, D.D.Bruguier, R.Devonshire
- 68:P Computer Modelling of Tungsten Transport in Halogen Incandescent Lamp  
P.Heeley, R.Devonshire
- 69:P An Elementary Three-Zones Channel Type Arc Model of A High Pressure Rare Gas - Rubidium Halide Discharge  
N.Sewraj, J.J.Damelincourt
- 70:L Unstable and Turbulent Gas Flows in Incandescent Lamps: Measurement and Modelling  
K.Joyce, R.Cairns, R.Devonshire, P.Heeley

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Session 6

( Diagnostics, Measurements and Miscellaneous )

Chairman : Rolf S. Bergman

- 71:I Spectroscopic Diagnostics of Glow Discharges  
J.E.Lawler, N.D.Gibson
- 72:L Measurement of Ar Lowest Excited State Densities and  
Temperatures in Ar and Ar-Hg Discharge  
K.Yuasa, K.Yamashina, T.Sakurai
- 73:L An Investigation of Thermodynamic vs Kinetic Control  
in Operating Halogen Lamps  
J.R.Woodward, M.J.Abbott, D.D.Bruguier, R.Devonshire
- 74:P Spectroscopic Studies of High Intensity Discharge Lamp  
M.Hamamoto, H.Yamasaki, T.Kai, K.Muraoka, T.Sumitomo, S.Wada
- 75:P Wall Effect on Optical Emission Spectroscopy  
I.Arikata, T.Kubota, K.Amakawa
- 76:P A Versatile Manufacturing Test Cell for Low Pressure  
Discharge Lamps  
W.Yu, G.Gregory, P.Ingram, R.Devonshire
- 77:P Development of Spectrometer for NIR Region by New Method  
T.Okura, Y.Yamaguchi, T.Ooka, T.Inoue, K.Uchida, T.Inoue
- 78:P Measurement of  $\text{Hg}6p^3P_{0,1,2}$  State Densities in Low-Pressure  
Ar-Hg Discharge Plasma Used for Liquid Crystal Display  
Back-Lighting  
M.Goto, T.Arai
- 79:P Cadmium Ion Lamps with High Radiant Efficiency  
A.Yamaguchi, Y.Yasuda, T.Hiramoto
- 80:P High Power Continuous VUV Radiation of  $\text{D}_2$  - Hg Lamp  
M.Kubo, I.Takahashi, M.Aono, R.Itatani
- 81:P Micro Hollow Cathode Array Discharge  
W.W.Byszewski, K.H.Schoenbach, R.Verhappen, F.E.Peterkin

- 82:P Neon-Discharge Based Motorcar Stoplights  
F.A.S,Ligthart, J.Geboers,
- 83:P Carbon Emitters — New Aspect of Infra-red Technology  
K.J.Dietz, K.Schmitz, C.Zou, A.C.Dexter, A.Heaton, W.Jones
- 84:P The Infra-red Suppression in Incandescent Light from  
Submicron Holes  
M.Sugimoto, T.Fujioka, T.Inoue, H.Fukushima, Y.Mizuyama,  
S.Ukegawa, T.Matsushima, M.Toho
- 85:P Mechanical Aspects of Coil Geometry  
B.van Bakel, E.Gerritsen
- 86:P Tensile Strength of W-Wire at High Temperatures  
H.Ikegami, T.Igarashi, T.Hiramoto
- 87:P Choice of Suitable Filling Pressure for (Halogen)  
Incandescent Lamps: Theoretical and Experimental  
Investigations  
A.Bodmer, M.Damm, R.Minder
- 88:P Investigation of Quality for Tungsten Halogen Lamps with  
Different Filled Gas Composition  
Chen Dahua, Zhan Yunxiang
- 89:P Investigation of Exhausting Process with Injecting Oxygen  
in Manufacturing Lamps  
Pan Zongqiao
- 90:P A 26 in. Full Color Plasma Display Panel :  
Design and Luminous Characteristics  
N.Kosugi, K.Hamada, K.Takahashi, N.Isobe, S.Fujiwara,  
K.Wani, M.Seki, H.Murakami
- 
- 91:I The Progress of and Prospects for The Plasma Display  
H.Murakami

August 31, Morning  
9:00 - 12:00

Session 7  
( Materials and Environment )  
Chairman : S. Kamiya

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K.Maekawa
- 93:L The Characteristic Improvement of The Ceramic Metal  
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T.Takeji, S.Taniguchi, S.Mori, Y.Hida, K.Nakano, J.Honda,  
H.Takasu, H.Nagai, K.Hayashi
- 94:L Multiplet Structure Calculations for Rare Earth Ions  
S.Itoh, N.Nameda
- 95:P Designing and Synthesis of Blue Phosphors Whose Spectral  
Properties are Changing Continually and Its Influence on  
CRI of Three Band Phosphors Blend.  
Jinggen Huang, Xinghai Yu, Maofu Tong, Jianping Jiang,  
Zuquan Cai
- 96:P The Rise of Ra by Improvement of Blue Alkaline Earth  
Aluminate Phosphor  
T.Hisamune, N.Kijima, S.Fujino, Y.Oguri
- 97:P Red Emitting Phosphors for Three-Band Fluorescent Lamps  
Y.Sakakibara, A.Taya, N.Matsuda, H.Takemura
- 98:P Luminance Degradation by Forming  $\text{Eu}^{3+}$  Ion in  $\text{Eu}^{2+}$  Doped  
Barium Magnesium Aluminate Phosphor  
S.Oshio, T.Matsuoka
- 99:P Feasibility of The Two Photon Emission Atomic Phosphor  
M.Toho, H.Kimura
- 100:P Optical Filters on Linear Halogen Lamps Prepared by Dip  
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G.Hebblinghaus, G.Frank, C.J.M.Denissen
- 101:P Preparation of Cerium Oxide Thin Film and Their Optical  
Properties  
H.Maiwa, N.Ichinose

- 102:P Improved Mercury Source and Getter Suitable for Fluorescent  
Lamps Manufacturing  
S.P.Giorgi, A.Schiabel, C.Boffito
- 103:P A Study of Mercury Consumption in Fluorescent Lamps  
H.Tomioka, T.Higashi, K.Iwama
- 104:P Reuse of Fluorescent Lamp Phosphors  
H.C.G.Verhaar
- 105:I Environmental Aspects of Discharge Lamps  
H.P.Stormberg