



Illuminating
ENGINEERING SOCIETY

IES TM-21-11

Projecting Long Term Lumen Maintenance of LED Light Sources

This is a preview. [Click here to purchase the full publication.](#)

Projecting Long Term Lumen Maintenance of LED Light Sources

Publication of this Committee
report has been approved by IES.
Suggestions for revision should
be directed to IES.

Prepared by:
The Subcommittee on Solid State Lighting of
the IES Testing Procedures Committee

[This is a preview. Click here to purchase the full publication.](#)

Copyright 2011 by the Illuminating Engineering Society of North America.

Approved by the IES Board of Directors, July 25, 2011, as a Transaction of the Illuminating Engineering Society of North America

All rights reserved. No part of this publication may be reproduced in any form, in any electronic retrieval system or otherwise, without prior written permission of the IES.

Published by the Illuminating Engineering Society of North America, 120 Wall Street, New York, New York 10005.

IES Standards and Guides are developed through committee consensus and produced by the IES Office in New York. Careful attention is given to style and accuracy. If any errors are noted in this document, please forward them to Rita Harrold, Director of Technology, at the above address for verification and correction. The IES welcomes and urges feedback and comments.

Printed in the United States of America.

ISBN # 978-0-87995-259-4

DISCLAIMER

IES publications are developed through the consensus standards development process approved by the American National Standards Institute. This process brings together volunteers representing varied viewpoints and interests to achieve consensus on lighting recommendations. While the IES administers the process and establishes policies and procedures to promote fairness in the development of consensus, it makes no guaranty or warranty as to the accuracy or completeness of any information published herein.

The IES disclaims liability for any injury to persons or property or other damages of any nature whatsoever, whether special, indirect, consequential or compensatory, directly or indirectly resulting from the publication, use of, or reliance on this document

In issuing and making this document available, the IES is not undertaking to render professional or other services for or on behalf of any person or entity. Nor is the IES undertaking to perform any duty owed by any person or entity to someone else. Anyone using this document should rely on his or her own independent judgment or, as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given circumstances.

The IES has no power, nor does it undertake, to police or enforce compliance with the contents of this document. Nor does the IES list, certify, test or inspect products, designs, or installations for compliance with this document. Any certification or statement of compliance with the requirements of this document shall not be attributable to the IES and is solely the responsibility of the certifier or maker of the statement.

Prepared by the Subcommittee on Solid State Lighting of the IES Testing Procedures Committee

TM-21 Working Group

Ralph Tuttle, *Technical Coordinator*

Kei Haraguchi
Mark Hodapp

Jianzhong Jiao
Cameron Miller
Yoshi Ohno
Trenton Pulsipher

Emil Radkov
Eric Richman
David Szombattfalvy

Solid-State Lighting Subcommittee

Cameron Miller, *Chair*

J. Adinolfi*	D. Grandin*	H. Kashani*	I. Rosso*
C. Andersen	M. Grather	P. Keebler*	R. Rykowski*
J. Andersen	K. Haraguchi	M. Koltrebai	E. Sahaja*
A. Baker*	R. Hechfellner*	K. Krueger	M. Sapcoe
R. Berger	K. Hemmi*	R. Lee	J. Schutz
R. Bergman	S. Herman*	M. Lehman*	K. Scott
D. Bradley*	T. Hernandez*	J. Linquta*	G. Shaefer*
E. Bretschneider	Y. Hiebert*	J. Ludyjan*	F. Shum*
D. Chan*	J. Hospodarsky	J. Marella	L. Stafford*
G. Chan*	F. Hua*	M. Mayer	G. Steinberg
X. Chen*	J. Hulett	M. McClear*	T. Tomonaga*
P-T. Chou*	P-C. Hung*	G. McKee	G. Trott*
Z. Coleman*	A. Jackson*	R. Naus*	R. Tuttle
K. Curry	J. Jang	D. Neal*	V. Venkataramanan*
E. Daubach*	D. Jenkins	Y. Ohno*	J. Welch*
M. Dyble*	J. Jiao	S. Patel*	K. Wilcox*
S. Eilersick*	H. Jung*	E. Radkov	J. Yon
D. Ellis	J. Kahn*	S. Rane*	J. Zhang
	M. Kalkas*	E. Richman	
	D. Karabelas	M. Riebling*	

Testing Procedures Committee

Michael Grather, *Chair*

L. Ayers*	T. Hernandez*	L. Leetzow*	J. Ronquillo-Umatan*
C. Andersen	R. Horan	K. Lerbs*	M. Sapcoe
A. Baker*	J. Hospodasky	R. Levin*	J. Schutz*
R. Berger	S. Hua*	I. Lewin	D. Smith*
R. Bergman	P. Hung*	R. Low*	R. Speck**
R. Bergin*	D. Husby**	J. Marella	L. Stafford*
E. Bretschneider*	S. Hutton*	G. McKee	G. Steinberg
K. Broughton*	D. Jenkins*	C. Miller	K. Wagner*
R. Dahl*	J. Jiao	B. Mosher	J. Walker*
R. Daubach*	M. Kalkas	W. Newland	J. Welch*
D. Ellis	D. Karabelas	Y. Ohno*	K. Wilcox*
A. Foy*	R. Kelley*	G. Plank*	J. Yon*
P. Franck*	M. Kotrebai	E. Radkov	J. Zhang
R. Heinisch*	K. Kruger	D. Randolph	
	B. Kuebler*	E. Richman*	<i>Advisory Member*</i>
	J. Lawton*	M. Riebling*	<i>Honorary Member**</i>