

ANSI/IEEE Std 100-1977

IEEE Standard Dictionary of Electrical and Electronics Terms

Library of Congress Catalog Number 77-92333

© Copyright 1977

The Institute of Electrical and Electronics Engineers, Inc.

*No part of this publication may be reproduced in any form,
in an electronic retrieval system or otherwise,
without the prior written permission of the publisher.*

Second printing 1978

December 1, 1977

SH07088

chrominance. The colorimetric difference between any color and a reference color of equal luminance, the reference color having a specified chromaticity. *Notes:* (1) In three-dimensional color space, chrominance is a vector that lies in a plane of constant luminance. In that plane it may be resolved into components, called chrominance components. (2) In color television transmission, for example, the chromaticity of the reference color may be that of a specified white. 18, 178

chrominance channel (color television system) (television). Any path that is intended to carry the chrominance signal. *See also:* television. 63, 178

chrominance channel bandwidth (television). The bandwidth of the path intended to carry the chrominance signal. *See also:* television. 163, 178

chrominance components. *See:* chrominance.

chrominance demodulator (color television reception). A demodulator used for deriving video-frequency chrominance components from the chrominance signal and a sine wave of chrominance subcarrier frequency. 18, 178

chrominance modulator (color television transmission). A modulator used for generating the chrominance signal from the video-frequency chrominance components and the chrominance subcarrier. 18, 178

chrominance primary (color television). A transmission primary that is one of two whose amounts determine the chrominance of a color. *Note:* Chrominance primaries have zero luminance and are nonphysical. The term is useful only in a linear system. 18

chrominance signal (color television). The sidebands of the modulated chrominance subcarrier that are added to the monochrome signal to convey color information. 18

chrominance signal component (television). A signal resulting from suppressed-carrier modulation of a chrominance subcarrier voltage at a specified phase, by a chrominance primary signal such as the I Video Signal or the Q Video Signal. 163

chrominance signal (television). *See:* television.

chrominance subcarrier (color television). The carrier whose modulation sidebands are added to the luminance signal to convey color information. 18

chronaxie (medical electronics). The minimum duration of time required to stimulate with a current of twice the rheobase. 192

chute.* *See:* feed tube.

* Deprecated

CIE. Abbreviation for Commission Internationale de l'Eclairage. *Note:* These are the initials of the official French name of the International Commission on Illumination. This translated name is approved for usage in English-speaking countries, but at its 1951 meeting the Commission recommended that only the initials of the French name be used. The initials ICI, which have been used commonly in this country, are deprecated because they conflict with an important trademark registered in England and because the initials of the name translated into other languages are different. 18, 178

CIE standard chromaticity diagram. One in which the x and y chromaticity coordinates are plotted in rectangular coordinates. *See also:* color. 167

CIE (1931) standard colorimetric observer. Receptor of

radiation whose colorimetric characteristics correspond to the distribution coefficients $\bar{x}_\lambda$, $\bar{y}_\lambda$, $\bar{z}_\lambda$ adopted by the International Commission on Illumination in 1931. *See also:* color. 244, 178

circle diagram (rotating machinery). (1) Circular locus describing performance characteristics (current, impedance, etcetera) of a machine or system. In case of rotating machinery, the term **circle diagram** has, in addition, some specific usages: The locus of the armature current phasor of an induction machine, or of some other type of asynchronous machine, displayed on the complex plane, with the shaft speed as the variable (parameter), when the machine operates at a constant voltage and at a constant frequency. (2) The locus of the current vector(s) of a nonsalient-pole synchronous machine, displayed in a synchronously rotating reference frame (Park transform, d - q coordinates), with the active component of the load, hence with the rotor displacement angle, as the variable (parameter), when the machine operates at a constant field current. (3) The locus of the current phasor(s) of (2). *see:* asynchronous machine. 63

circling guidance lights. Aeronautical ground lights provided to supply additional guidance during a circling approach when the circling guidance furnished by the approach and runway lights is inadequate. *See also:* atmospheric transmissivity. 167

circuit (1). A conductor or system of conductors through which an electric current is intended to flow. *See also:* center of distribution; service. 178, 64, 262

(2). A network providing one or more closed paths. *See also:* network analysis. 210

(3) (machine winding). The element of a winding that comprises a group of series-connected coils. A single-phase winding or one phase of a polyphase winding may comprise one circuit or several circuits connected in parallel. 63

(4) (circuits and systems). An interconnection of electrical elements. *See also:* network. 67

circuit analyzer (multimeter). The combination in a single enclosure of a plurality of instruments or instrument circuits for use in measuring two or more electrical quantities in a circuit. *See also:* instrument. 328

circuitation. *See:* circulation.

circuit, balanced. *See:* balanced circuit.

circuit breaker (1) (general) (A). A device designed to open and close a circuit by nonautomatic means, and to open the circuit automatically on a predetermined overload of current, without injury to itself when properly applied within its rating. 256, 124

(B) A mechanical switching device capable of making, carrying, and breaking currents under normal circuit conditions and also, making, carrying for a specified time, and breaking currents under specified abnormal circuit conditions such as those of short-circuit.

Notes: (1) A circuit breaker is usually intended to operate infrequently, although some types are suitable for frequent operation. (2) The medium in which circuit interruption is performed may be designated by suitable prefix, such as, air-blast circuit breaker, air circuit breaker, compressed-air circuit breaker, gas circuit breaker, oil circuit breaker, vacuum circuit breaker, etcetera. (3) Circuit breakers are classified according to their application or characteristics and these classifications are designated by