1 2 3 4 5 6	HOWARD J. PARKER PAULINE T. WAN JEANE HAMILTON NIALL E. LYNCH LISA V. TENORIO United States Department of Justice Antitrust Division 450 Golden Gate Avenue Box 36046, Room 10-0101 San Francisco, CA 94102 Telephone (415) 436-6660
7	Attorneys for the United States
8	UNITED STATES DISTRICT COURT
9	NORTHERN DISTRICT OF CALIFORNIA
10	SAN FRANCISCO DIVISION
11	
12	UNITED STATES OF AMERICA,
13	Plaintiff,
14	v. Civil Action No. C 00 2227
15	JDS UNIPHASE CORPORATION ) Filed: June 22, 2000 and E-TEK DYNAMICS, INC.,
16	Defendants.
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.18	
19	COMPLAINT
20	The United States of America, acting under the direction of the Attorney General of the
21	United States, brings this civil antitrust action to prevent the proposed merger between defendant
22	JDS Uniphase Corporation ("JDS") and defendant E-TEK Dynamics, Inc. ("E-TEK").
23	I.
24	NATURE OF THE ACTION
25	1. JDS and E-TEK are two of the leading manufacturers of components for fiber optic
26	communication systems. JDS competes against E-TEK in the production and sale of dense
27	wavelength division multiplexer and demultiplexer modules of 16 or fewer channels ("DWDMs").
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DWDMs are important components that increase the transmission capacity of fiber optic networks.
 These two manufacturers are each other's primary competitor in the production and sale of
 DWDMs.

2. Competition between JDS and E-TEK has benefited customers through higher
output, lower prices, increased quality, and faster delivery time. The acquisition of E-TEK by JDS
will substantially lessen competition in the production and sale of DWDMs in violation of Section 7
of the Clayton Act, as amended, 15 U.S.C. § 18. The proposed acquisition will substantially
increase the incentive and likelihood for the combined company to engage unilaterally in
anticompetitive behavior, such as suppressing output and increasing prices of DWDMs.

#### П.

### JURISDICTION AND VENUE

3. This action is filed by the United States under Section 15 of the Clayton Act, as
amended, 15 U.S.C. § 25, to prevent and restrain the defendants from violating Section 7 of the
Clayton Act, as amended, 15 U.S.C. § 18.

4. Both JDS and E-TEK produce and sell DWDMs throughout the United States and the
 world, commercial activities that substantially affect, and are within the flow of, interstate
 commerce. The Court has subject matter jurisdiction over this action and jurisdiction over the
 parties pursuant to Section 12 and 15 of the Clayton Act, 15 U.S.C. § 22, and 28 U.S.C. §§ 1331
 and 1337.

205.The defendants transact business and are found within the Northern District of21California.Venue is proper in this District under 15 U.S.C. § 22 and 28 U.S.C. § 1391(c).

#### Ш.

## THE DEFENDANTS AND TRANSACTION

JDS is a Delaware corporation, with its principal offices in San Jose, California. It
designs, manufactures and distributes fiber optic products for communications applications. It is
one of the world's largest independent suppliers of passive and active components for fiber optic
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communications networks. Passive components are composed of optical parts, while active
 components contain both optical and electronic parts. In 1999, JDS reported net sales of \$282.8
 million.

4 7. E-TEK is a Delaware corporation, with its principal offices in San Jose, California.
5 It designs, manufactures and distributes passive components for fiber optic communications
6 networks. In 1999, E-TEK reported net sales of \$172.7 million.

8. On January 17, 2000, JDS and E-TEK entered into an agreement whereby JDS will
acquire E-TEK by exchanging the outstanding shares of E-TEK common stock for shares of JDS
common stock. The transaction is valued at approximately \$15 billion.

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### IV.

### TRADE AND COMMERCE

# A. <u>Relevant Product Market</u>

13 9. The volume of traffic carried by communications networks has increased rapidly over the last several years as a result of the explosion of bandwidth intensive applications such as Internet 14 access, e-mail, remote access for computing, and electronic commerce. In the past, one fiber strand 15 in a fiber optic communications network could carry only a single channel of voice or data traffic. 16 Dense wavelength division multiplexers and demultiplexers separate the light signal in a fiber optic 17 strand into multiple wavelengths, or colors, with each wavelength capable of carrying a separate 18 communications channel. These multiplexers and demultiplexers enable the simultaneous 19 transmission of multiple channels on a single strand of fiber, and thereby increase the total 20 21 transmission capacity of the fiber optic network.

10. Thin film filters are a critical component part at the core of the DWDMs that are
designed, manufactured and sold by JDS and E-TEK. Thin film filters are made in a vacuum
coating chamber by depositing thin alternating layers of two dielectric materials on a polished glass
substrate. When packaged with other parts into a DWDM, each thin film filter will transmit a
certain wavelength of light and reflect or absorb other wavelengths.

11. The DWDM market is characterized by increasing demand and limited supply. No
 good substitutes exist for DWDMs purchased by suppliers of fiber optic communications networks.
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A small but significant increase in the price of DWDMs would not cause a significant number of
 customers to substitute other products.

3 12. The production and sale of DWDMs is a relevant product market, or "line of
4 commerce," within the meaning of Section 7 of the Clayton Act.

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В.

С.

## <u>Relevant Geographic Market</u>

If and E-TEK produce and ship DWDMs to customers throughout the United States
and the world. The world constitutes a relevant geographic market within the meaning of Section 7
of the Clayton Act.

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# Anticompetitive Effects and Entry

10 14. In 1999, world sales of DWDMs amounted to approximately \$285 million. The JDS
11 share of those sales was about \$116 million, which constitutes 41% of the total sales. The share of
12 E-TEK of the total sales was about \$76 million, which constitutes 27% of the total sales.

13 15. The world market for DWDMs will become substantially more concentrated if JDS
14 acquires E-TEK. Using a measure of concentration called the Herfindahl-Hirschman Index ("HHI")
15 (defined and explained in Appendix A), the proposed transaction will increase the HHI in the world
16 market for DWDMs by more than 2100 points to a post merger level of approximately 4700.

17 16. The merger between JDS and E-TEK will increase the defendants' combined share to
18 68% of the world market for DWDMs. This increase in market share will significantly enhance the
19 merged firm's incentive and ability to exercise market power unilaterally by reducing its output and
20 increasing its prices in the market for DWDMs. After the acquisition, defendants will have
21 sufficient market share in the DWDM market to profit from the increase in DWDM prices caused by
22 a unilateral reduction in output of DWDMs.

17. The potential for a significant increase in output of DWDMs by fringe firms and new
entrants in response to anticompetitive output reductions or price increases by the merged firm is
unlikely to be timely or sufficient to undermine such price increases. Competing firms are currently
operating at or near capacity.

27 18. Effective entry in the DWDM market by new firms or expansion of existing
 28 competitors sufficient to constrain anticompetitive behavior by the merged firm must overcome
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time-consuming obstacles. A significant obstacle to effective entry or expansion is the availability 1 2 of a sufficient supply of thin film filters. JDS has obtained virtually all of its supply of thin film filters from Optical Coating Laboratories, Inc., with which JDS established a strategic alliance in 3 1997 and which it then acquired in February of 2000. E-TEK has obtained its supply of thin film 4 filters primarily through supply agreements that have included the acquisition of rights of first 5 refusal over output from thin film filter coating chambers located on the premises of merchant 6 suppliers. E-TEK has also supplied itself with thin film filters produced at coating chambers located 7 on company premises. Together, JDS and E-TEK in 1999 controlled approximately 80% of the 8 world's thin film filter output. 9

10 19. It is a difficult and time consuming process to develop the capability of producing
11 thin film filters cost effectively. Vacuum coating chambers and sophisticated optical monitoring
12 systems to control the thin film deposition process must either be designed and constructed
13 internally or be acquired from commercial vendors of such equipment. Once coating chambers are
14 installed, a potentially lengthy trial and error development process is needed to approach the
15 manufacturing yields of the leading incumbents.

16 20. In addition to these limitations on the supply of thin film filters, there are further
17 obstacles to timely and sufficient new entry as a supplier of DWDMs. These obstacles include the
18 need to design a DWDM that can be produced cost effectively in commercial volume and that meets
19 specifications and is acceptable to customers for use in fiber optic communications networks.
20 Customers commonly require rigorous and extensive testing over a substantial period of time before
21 previously untested DWDMs are qualified and accepted for use in such networks. These obstacles
22 are less significant for fringe firms already producing DWDMs.

23 21. In the world market for DWDMs, the proposed acquisition threatens substantial and
24 serious harm to purchasers of DWDMs. By significantly increasing the market share of JDS in
25 DWDMs, the proposed acquisition will provide the combined company with substantially enhanced
26 control over the output and price of DWDMs. Furthermore, customers of DWDMs will lose the
27 competition between JDS and E-TEK which has resulted in faster product delivery times and
28 improvement in product quality.

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1		V.
2		VIOLATION ALLEGED
3	22.	The effect of the proposed acquisition by JDS of E-TEK will be to lessen competition
4	substantiall	ly in interstate trade and commerce in violation of Section 7 of the Clayton Act.
5	23.	Unless restrained, the transaction will likely have the following effects, among others:
6	a.	actual and potential competition between JDS and E-TEK will be eliminated;
7	b.	competition generally in the production and sale of DWDMs will be lessened
8		substantially; and
9	c.	the output of DWDMs will be lower and the price for DWDMs higher than they
10		otherwise would be.
11		VI.
12		REQUESTED RELIEF
13	WHEREF(	ORE, Plaintiff requests:
14	1.	That the proposed acquisition of E-TEK by JDS be adjudged and decreed to violate
15		Section 7 of the Clayton Act, as amended, 15 U.S.C. § 18;
16	2.	That the defendants be permanently enjoined from and restrained from carrying out
17		the acquisition agreement of January 17, 2000, or from entering into or carrying out
18		any agreement, understanding, or plan, the effect of which would be to combine the
19		businesses or assets of JDS and E-TEK;
20	3.	That the plaintiff be awarded its costs of this action; and
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1 4. That plaintiff receive such other and further relief as the case requires and the Court 2 deems just and proper. 3 Dated this 224 day of June 2000. 4 5 Respectfully submitted, 6 7 8 FOR PLAINTIFF UNITED STATES dr > Crook 9 10 Joel I/ Klein Christopher S Crook Chief, San Francisco Field Office Assistant Attorney General 11 12 onker 13 Donna E. Patterson Howard J. Parke Deputy Assistant Attorney General Pauline T. Wan 14 Jeane Hamilton Niall E. Lynch Lisa V. Tenorio 15 Trial Attorneys U.S. Department of Justice Antitrust Division 16 Constance K. Robinson Director of Operations and Merger 17 Enforcement San Francisco Field Office 18 19 20 21 22 23 24 25 26 27 28 COMPLAINT -- Page 7

1	APPENDIX A
2	DEFINITION OF "HHI"
3	The term "HHI" means the Herfindahl-Hirschman Index, a commonly accepted measure of
4	market concentration. The HHI is calculated by squaring the market share of each firm competing
5	in the market and then summing the resulting numbers. For example, for a market consisting of
6	four firms with shares of 30, 30, 20, and 20 percent, the HHI is $2,600 (30^2 + 30^2 + 20^2 + 20^2 = 10^2)$
7	2,600). The HHI takes into account the relative size and distribution of the firms in a market. It
8	approaches zero when a market is occupied by a large number of firms of relatively equal size and
9	reaches its maximum of 10,000 when a market is controlled by a single firm. The HHI increases
10	both as the number of firms in the market decreases and as the disparity in size between those firms
11	increases.
12	Markets in which the HHI is between 1000 and 1800 are considered to be moderately
13	concentrated, and markets in which the HHI is in excess of 1800 points are considered to be highly
14	concentrated. Transactions that increase the HHI by more than 100 points in highly concentrated
15	markets presumptively raise significant antitrust concerns under the Department of Justice and
16	Federal Trade Commission 1992 Horizontal Merger Guidelines.
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